

THE MEDICAL AND SURGICAL REPORTER.

No. 1984.

MARCH 16, 1895.

VOL. LXXII—No. 11

ORIGINAL ARTICLES.

OPERATIVE PROCEDURE FOR THE RELIEF OF PROFOUND DEAF- NESS, LOUD SUBJECTIVE NOISES AND VERTIGO.

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In cases of profound deafness with loud subjective noises, not relieved by ordinary methods and accompanied by severe vertigo, one must resort to some operative procedure for relief. We will briefly enumerate the various operations which have been proposed and performed prior to the radical operations of excision of the entire membrana tympani, or of the ossicles, or both, and which in our hands, as also in those others have given the most satisfactory results.

PARACENTESIS OF THE MEMBRANA TYM- PANI AND MYRINGODECTOMY.

The operation of puncturing the membrana tympani has been employed since the time of Sir Astley Cooper and is still resorted to for relieving an effusion of serum, pus and blood; also to improve or to reduce a thickened membrana tympani. At one time it was highly lauded and again much neglected; was revived by Bonnafont and others, but never founded upon a true and pathological basis.

The relaxation of the membrana tympani accompanied with thinning of its substance, is a very frequent effect of the protracted presence of mucus within the tympanum, and when mucus is present

within the tympanum, the membrane is depressed, at least in parts, rather than protruded outwards. After paracentesis or perforation, it is well to wash out the tympanum with a warm, weak solution of bicarbonate of soda or of chlorate of potash (gr. v to the ounce) which is syringed freely through the perforation. This is done by means of the Eustachian catheter, but in the opposite direction by applying the syringe to the meatus, the nozzle being well covered with elastic tubing so as to fit closely without causing pain. The stream, with care, may be sent up with considerable force provided the Eustachian tube be open, and it will escape by the nostril, the head, of course, being bent forward. This cleansing should be repeated every second or third day until all appearance of an accumulation has ceased. Then a solution of sulphate of zinc (grs. ij-x. ad f. ʒi of water) may be substituted and used in the same way.

When the membrane is incised we often find a yellow viscid matter which should be washed out. In chronic cases it is well to syringe into the tympanum with a solution of the nitrate of silver (grs. ij. v. ad f. ʒj) and then perform inflation.

The author has resorted to this operation in chronic cases of catarrh of the

tympanum, in several instances with more or less success. When it is desirable to make a simple puncture, the instrument Fig. A was employed; but if a portion of the membrana tympani was to be removed

cautery or with concentrated sulphuric acid as recommended by Simcock of New York, only applying one small drop on the point of a glass probe, all the surrounding parts protected.



FIG. A.

by excision of a piece of the membrane, or *myringotomy* with or without cauterization or a large incision made, he used the sickle-shaped myringatome. The operation, in some instances, is attended with considerable pain; to allay this, and the nervous feeling attending the dread of the operation, it is well to employ a 10

ACCUMULATION OF SERUM IN THE TYMPANIC CAVITY.

In the valuable monograph of Politzer on "The Membrana Tympani in Health and Disease," the translators have added a supplement from him of the diagnosis and treatment of the accumulation of fluid resembling serum in the tympanic cavity but not involving the transparency of the membrana tympani; that is it admits light enough into the cavity so that this fluid can be seen, being of a dark gray color on the membrana tympani. The boundary between the parts is marked by a fine black line, having the appearance of a black hair lying upon the membrane. By causing the patient to lie down, the black line changes its position, showing it to be fluid. When the air is forced through the Eustachian tube by Politzer's method and the membrana tympani inspected, the following changes occurred: the lateral portions of the membrane bulged out, and, instead of the distinct limitation in the colors before described, the whole field is covered with rings (or air bubbles in the fluid), of various sizes, having dark contours. The other symptoms were deafness and pressure in the head with loud ringing.

The treatment in the majority of these cases consisted in the employment of his method for inflating the middle-ear, with the head bent over to the opposite side and somewhat forward. In the cases in which the membrane was much shrunken and presented a dark greenish-yellow color, Dr. Politzer, after using the air douche with only temporary success, performed paracentesis and immediately afterwards forced air through the ear by his method, thus driving the matter out into the external meatus.



FIG. B.—HARTMANN'S TENOTOME.

Filled in a very convenient handle, it is curved at M and filled in the joint H, while there is a screw at S, so as to hold it firm. Several other instruments can be used in this handle.

grain solution of cocaine. Cauterization of the membrana tympani by the galvano

SECTION OF THE POSTERIOR FOLD OF THE
MEMBRANA TYMPANI.

In a small number of these cases has there been permanent improvement. It was first recommended by Politzer in 1871, and a year later by Lucae. His mode of operating is as follows: For section of the posterior fold of the membrana tympani he used a small knife, rounded at its point, sharp-edged, with the blade fixed at an angle to its handle, or else the lancet.

The section is made perpendicular to the longitudinal direction of the fold from above downwards, and the most favorable place for incision is midway between the short process and the peripheral extremity of the fold. The division of the fold is generally accompanied by a grating noise, the margins of the wound recede from one another and the handle of the malleus, which was moved inwards, assumes a more perpendicular position. The bleeding after the operation is generally trifling. Sometimes it is considerable on severing the vascular bundle which extends from the membrana tympani to the upper wall of the meatus, but it can soon be arrested by applying a small plug of absorbent cotton to the incision. This application is also advisable when there is only slight bleeding, to prevent the membrana tympani from being clogged with a crust of blood. Sometimes the blood flows from the wound inwards towards the tympanic cavity, in which case the improvement is observable only after its absorption.

TENOTOMY OF THE TENDON OF THE
TENSOR-TYMPANI AND STAPE-
DIUS MUSCLES.

Improvement in the hearing has at times followed these operations, but now and then there is a decrease of the subjective noises after the operation.

Division of the tendon of the tensor tympani was proposed by Hyrtl in his "Topographische Anatomie," 1847, and was first performed in the living ear by Weber-Liel, in 1868.

The most important objective signs of shortening of this tendon are held to be great inward curvature of the membrana tympani; foreshortening of the handle of the malleus; great projection of the short

process and of the posterior fold; and also such a state of the membrane as is often found when the Eustachian tube is impermeable.

The instrument for dividing the tendon of the tensor-tympani is introduced into the tympanic cavity in front of the handle of the malleus by some specialists (Weber-Liel), behind it by others (Votolini, Schwartz, Hartmann). The latter situation is, according to Politzer, by far the safer and gives the operation a better chance of success.

The tenotome of Hartmann is generally preferred, which consists of a small knife curved on the flat and on the edge, the point of which reaches about 1 mm. farther outwards than its upper edge. This has proved the most serviceable instrument of all, as with it the operation is performed most safely and without any injury to other parts.

To form an accurate estimate of the success of the operation, it is advisable, as was insisted on by Hartmann, first to make an incision into the posterior segment of the membrana tympani about 1 mm. behind the handle of the malleus, and then to ascertain what change occurs in the hearing distance and in the subjective noises. Then Hartmann's tenotome is introduced through the incision into the tympanic cavity for a distance of about 3 mm., whereby the instrument is placed below the tendon of the tensor-tympani between the handle of the malleus and the long crus of the incus. By slightly sinking its handle the sharp point of the tenotome is forced so far towards the upper part of the tympanic cavity that the tendon is obliquely divided when the instrument is withdrawn.

The division of the tendon is often accompanied by a peculiar grating noise, and sometimes a considerable effusion of blood into the tympanic cavity is observed after the instrument has been removed. This is absorbed after a few weeks.

MOBILIZATION AND EXTRACTION OF THE
STAPES.

This operation is indicated in very dry middle-ear catarrh, where the function of the auditory nerve is intact and speech may be quite distinctly heard, and to be effective the adhesions must be torn. Simply stretching and pulling them is

very apt to cause shrinking and retraction.

Mobilization of the stapes is believed to give more frequent and more satisfactory results, judging from the first thirty-five cases in which Bucheron has performed the operation. He holds the procedure to be without danger, and comparable on the one hand to the operation for glaucoma—in relieving the pressure on the nerve, and the other hand to that for cataract—in removing an injurious mechanism.

No accident occurred in the thirty-five cases mentioned, except some insignificant cases of otorrhœa, and that in some the chorda tympani was divided with the result of temporary loss of taste in the corresponding half of the tongue.

As a rule the hearing power for ordinary conversation was doubled or trebled. When the deafness was of moderate intensity and duration, there was a very marked amelioration in two-thirds of the cases, and the improvement was immediate.

Boucheron cites two cases as examples, and gives the following indications for the operation if the function of the auditory nerve be unaffected:

1. Certain cases of progressive hereditary deafness, with intermittent obstruction of the Eustachian tube and sclerosing contraction of the ligaments of the ossicles.
2. Certain cases of deafness with vertigo and humming tinnitus (Meniere's symptoms).
3. Certain cases of infantile deafness to mutism.
4. Certain cases of progressive senile deafness.
5. Certain cases of paracusia Willisii.

Extraction of the stapes is an operation which is still under trial, and although very brilliant results have been reported, later observations do not confirm.

SYNECHOTOMY OF THE CRURA OF THE STAPES.

According to Politzer, this operation is only applicable in those cases in which the objective examination gives a marked negation (Rinne), and lengthened duration of perception for the C' tuning-fork through the cranial bones, as well as intact tone perception for the acoumeter. Besides, the mobility of the malleus should

be proved by means of Siegel's speculum. This operation has been performed in 18 cases. In four of these cases, in which the deafness was of such a high degree that spoken words could be heard only in the immediate neighborhood of the ear, the stapes proved to be ankylosed and the result was *nil*. Of the other fourteen cases, in only five was there marked and permanent improvement in hearing, as the hearing distance increased from 1 to 1½ m.m to 4, to 7.11 m.m. and accompanying subjective noises were decreased. In the other nine cases, the improvement in hearing after the operation was of a slight degree and was transient. The operation is worthy of further trial in properly selected cases.

EXCISION OF THE ENTIRE MEMBRANA TYMPANI AND THE EXTRACTION MALLEUS AND INCUS.

Simrock, of New York, was one of the first who made the experiment of removing the cause of deafness in chronic thickening of the membrana tympani in middle-ear catarrh with adhesions or a partial ankylosis of one or more ossicles. After the operation he found that a membranous cicatrix formed over it, filling the whole cavity and adhering to the inner wall of the tympanic cavity. Kessel advised also the removal of the cartilaginous ring on the posterior circumference of the membrane, so as to obtain a more permanent opening. Schwartz considered it dependent upon the presence of the cartilage at the limbus. It was Dr. Sexton, of New York, who brought the operation fully before the aural surgeons of the world and advocated the operation.

The improvement, as observed by all successful operators, depends upon the stapes, for if this bone is fixed sound conduction is imperfect. This is of the utmost importance to determine before the operation, and this, with other sources of failure, is what has been dwelt upon so much. No reference will be made to the operation of the removal of the whole or of part of the diseased tissue or bones following otitis-media purulenta chronica. This and the consideration of Stacks radical operation for obstinate chronic otorrhœa will be reserved for another paper, having had full opportunity for the study of both classes, and having per-

formed both operations in private and publicly in the clinic with my colleague, Dr. J. MacCuen Smith, in the Ear Department of the Jefferson Medical College Hospital.

A REPORT OF CASES NOT SUITABLE FOR
OPERATION AND ILLUSTRATIVE OF
THE ABOVE OBSERVATIONS.

CASE I.—*Paralysis of Auditory Nerve.* Martha A., aged forty-nine, living in Chester, Pa., has suffered from deafness for many years, the result of a chronic catarrhal inflammation. Voice not heard unless words were shouted into the ear by a familiar voice, and even then many were not understood, so that she was obliged to resort to writing. No form of ear trumpet improved her condition. The tuning fork was neither heard in the air nor on bones of the head as a musical note. No operation could be performed in this case.

CASE II.—Miss Mary H. C., aged thirty-four; chalky deposit between all the bones with fixation of the stapes. The subject belonged to a gouty family, and was so deaf as only to hear the voice when loudly spoken near the ear and the speaker was looking at her; general conversation not heard. Tuning fork heard when placed over the bones of the head, and in the air when held close to auditory meatus. There was also a family history of deafness. The lady was very desirous of having the operation performed, although no positive opinion of a favorable result was offered. She had been under the care of several competent aurists, but with no permanent good results. Unfortunately, the "Bing" test was not employed. The operation was performed by a friend and a chalky condition was found, only the membrana tympani and malleus could be removed in a broken condition, incus not found. The operation produced a very slight improvement, but with few chances of permanent result. The stapes remained intact, but was more or less involved in the deposit.

CASE III.—Diphtheria; the deafness involving the auditory nerve, etc. R. E. C., aged thirty-six. Deafness in both ears of many years duration, so deaf as to require being spoken to in a very loud tone and close to the auricle.

History: Had a severe attack of diphtheria when a girl, which involved every

part of the ears, nose and throat, and her life was despaired of. She recovered her voice and her throat became so she could swallow, but her hearing gradually became more and more impaired, leaving her with sclerosis and atrophic neuritis. In spite of careful treatment of a local and general character, she was unable to hear her own watch in her right ear, and neither voice nor watch in her left. The membrana tympani was very much depressed and filled with cicatricial tissue, and no outline of ossicles could be seen with a bright electric light. Being in despair about her ears, she was recommended to a medical gentleman of this city, who gave her the encouragement that by an operation she would be improved. She was ready "to catch at a straw," especially as the physician told her of successful cases upon whom he had operated. Under an anesthetic, he removed first, the entire membrana tympani and malleus, then the incus, and lastly elevated the oval window to release foot-plate of the stapes. There was unfortunately, not the slightest improvement. Now, this was a case where no operative interference was justifiable except for the relief of a discharge. For several reasons: First, the very profound deafness; second, the deafness being a sequel of diphtheria. This destructive disease not only produces outward changes in the nostrils and throat but almost always involves the tubal muscles with paralysis, followed even by disease of the labyrinth.

THE PROPER CLASS OF CASES TO BE OPERATED UPON—THE PROPER METHOD OF OPERATING, AND THE RESULT OF THE OPERATION UP TO THIS TIME.

Healthy family history, of which we have already spoken; no hereditary tendency to deafness; ability to hear the voice as speech, even when spoken close to the ear; no ozena or atrophic rhinitis; ability to hear the voice through the hearing trumpet or according to the "Bing" method, as speech.

It is an absolute rule first to be certain that the auditory nerve is not organically diseased but only functionally involved, by careful testing. For if a patient is unable to hear the combinations of letters and words in speech loudly spoken in the

ear, the case is not a suitable subject for operation. If the patient is unable to hear the lingual R, it is often an indication of defects of the membrana tympani. Care should be taken that the mouth is not seen nor the lips read when making these examinations.

Still another test is by means of the speaking tube or trumpet, for "if speech is not heard through sound conduction by means of the ossicles, hearing does not exist" (Politzer). Each ear should be examined separately, and the testing performed as follows: The patient stands opposite the physician, facing him and with his eyes directed downward to the floor. The patient is tested first by means of the self-sounding consonants alone, R lingual, B, K, T, F, S, Sch, G soft, as well as the very deeply whispered U. Being unable to hear the F sounds occurs oftenest in labyrinth disease, according to Wolf. Politzer holds that his method of testing the hearing distance for speech, before and after treatment, is the most important, as it gives the surest judgment of the amount of and the improvement in hearing. It is also necessary to determine whether or no there is anchylosis of the stapes, for the malleus and incus may

be removed without the slightest relief to the deafness as the stapes is fixed in the bone (oval window).

Dr. Bing, of Vienna, has by this method, been able to assist us in making a diagnosis concerning the variety of deafness before operating. He calls it the "entotic" use of the speaking tube—speaking into the funnel of a speaking tube while in position, the other end of which is directly connected with the cavity of the tympanum by means of fitting into a catheter introduced in the Eustachian tube. By this means the waves of sound pass through the speaking tube, catheter and Eustachian tube into the cavum tympani; they reach the foot-plate of the stapes and the fenestra ovalis, and by them communicate to the fluid of the labyrinth and auditory nerve.

According to Politzer, in a case where speech is not heard through a speaking tube in the external meatus by the "entotic" method, there is a hindrance to sound conduction in the malleus or incus and the foot-plate of the stapes is not freely movable in the fenestra ovalis.

In another article we will give the proper method of operating, and some of the collected results of the operation.

GUNSHOT WOUNDS.*

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The literature of gunshot wounds in private practice is very meagre, and he who depends upon it for guidance in emergencies will be greatly disappointed.

The safest and only fixed rule here, is a sound surgical knowledge, based upon known truths of pathology, and brightened by a cultivated and continuous study of the latest developments in surgical proceedings. For there can be no absolute ironclad rules laid down from which, in such cases, one can choose that which is suitable to his own use, but must depend upon his own surgical skill and knowledge to adapt his treatment to the case in hand.

In the South, where gunshot wounds are prevalent as a mode of personal in-

jury, we ought to have more knowledge of the history, treatment and results of such injuries than we now possess.

But to my surprise, I find the data even here very scant. I do not propose in this paper to seek out and record the cases reported and the results obtained by others, but will try to interest this Association with some cases, and will deduce some facts from them that may hereafter be of service to others.

GUNSHOT WOUNDS OF THE ANKLE JOINT.

CASE I, of A.—A lad of fourteen years, while toying with a pistol, accidentally discharged it, the ball entering two inches above the internal malleolus of the right leg, passing down and outward, pene-

* Read by title before the South Carolina State Association, 1894.

trated the lower end of the tibia, and on through the ankle joint and into the os calcis, or into the articulation between it and the tibia, and lodged somewhere in that vicinity.

It was a 38-calibre, Smith & Wesson pistol, and of great penetrating power. It passed through about two inches of bone in all. I saw him about two hours later, gave ether, and tried to find the ball, as I thought it would probably dislodge the boy if left where it lodged. I could find nothing but pieces of shattered bone. I washed out the wound with bichloride 1:2000, and sent him home, promising nothing as to prognosis.

The next day, temperature 100°, otherwise doing well; kept up the bichloride wash twice a day, temperature rising gradually for several days, never, however, rising above 102°; usually rested well, with phenacetine at night. In six days suppuration had set in, much to my regret.

This kept up for several days, when I discovered a flushed and tender spot below the internal malleolus. This I afterwards opened, and it discharged freely. I now gave up all hope of saving the joint as a useful appendage. Four days after this another abscess came on the malleolus, and broke before I saw it. Now the cause for the suppuration I had labored so hard to prevent was made manifest. Something dark appearing in the opening, I picked it up with forcep, and extracted a piece of woolen sock carried in with the ball. This was repeated from day to day until all was out. After this all the places, together with the wound of entrance, healed up kindly, and the boy soon took up his crutches, and at this time, four months since the accident, walks half a mile to school, with a slight deformity in his gait, and with a moderate degree of impairment of the usefulness of the joint itself.

Since this was written the ball appeared just under the skin, to the right of Tendo Achilles, above the os calcis, and was cut out by the father of the boy. The lameness is greatly improved.

GUNSHOT WOUND IN THE KNEE-JOINT.

The second case appeared in the practice of my friend, Dr. H. A constable fired a No. 38 ball, from a Smith & Wes-

son pistol, into a fleeing prisoner, the ball entering from behind, in the popliteal region, passed around or through the knee-joint, and when he was seen by Dr. H. the ball could be felt in front, near the patella. He was kept quiet with an antiseptic dressing over the wound, and a splint and roller over the leg and thigh for several weeks. The splint was removed and the leg left free, only he was not allowed to move it about. We saw him together frequently, and found the ball floating about in the accumulation of fluid that had gathered and could be pushed from front to rear around the joint, or through it and under the patella. In fact it seemed to be a privileged character in the joint, going when and where and how it pleased. After consultation, some days afterward, we decided to open the joint and extract the ball. This we did by pushing it down to its lowest descent, gathering it between the fingers, incising the skin upon it, and sewing it up, dressing antiseptically and placing the leg again at rest. It healed kindly and the man made a perfect recovery, with perfect use of the limb.

CASE III. J. B.—A constable in attempting to arrest a man became engaged in a fight in which the man was killed and J. B. desperately wounded.

The wound was made with shot about No. 4, and was fired from left and rear and not very far distant. The load entered the back four and a half inches to the right of the spinal column, and over the region of the eleventh and twelfth ribs. After being shot he walked half a mile to the county jail, and from there was conveyed to his boarding-house, half a mile distant. I was called at once to see him, but being absent Dr. L. K. Blake saw him for me and was engaged with me in the case until convalescence. B. is a man of powerful physique, over six feet high, weighing two hundred and forty pounds, aged forty, a man inured to labor and hardships, a carpenter by trade. When wounded he was on the state constable force in the discharge of his duty. When first seen by Dr. Blake, one hour after being wounded, there was much pain in the region of the liver and lower portion of right lung. Morphine and whiskey was given, wound dressed and he was made comfortable. I saw him at three o'clock the following morning

and found the following conditions: Wound as above described. The load seemed to have entered at an angle of about 30°. There was one central ragged wound large enough to admit the ends of three fingers and around this numerous shot holes, variously grouped, some ranging deeply into the tissues, others following the direction of the ribs just beneath the outer surface. The appearance of the outer wound seemed as if most of the shot had taken the latter direction. We did but little probing, as we did not wish to add to the traumatism already existing. After consultation with Drs. Heinitch and Blake it was decided to treat his case expectantly, as it was believed that the liver and colon were seriously damaged. The pain in the liver and difficult breathing, together with the location of the wound, and the great thickness of the abdominal wall led us to this decision, believing that in a few days he would probably die, and that operative interference would only hasten the end. So from day to day we watched him, and thought we could see the end approaching closer and closer. Of the ten physicians who saw him about this time all said he would die. We will now take up his history during this trying period and see what was the outcome.

NOTES ON BLAYTON'S WOUNDS.

December 27th, 9 P.M.—Some shock and chill, great restlessness and pain over right lung, in front about the sixth and eighth rib, pulse 76.

December 28th 3 A.M.—Pulse 96, resting quietly under morphine.

9 A.M.—Temperature 100°, pulse 100.

4 P.M.—Temperature 102°, pulse 106, vomited.

9 P.M.—Temperature 100°, pulse 106, vomited freely.

December 29th, 8 A.M.—Pulse 106, intermittent and very irregular, vomiting continuously, countenance anxious, temperature 98; bowels moved to day.

4 P.M.—Pulse 120, temperature normal, vomits only when taking whiskey; retains milk well.

8.30 P.M.—Temperature 100 2-5°, pulse 108, conditions somewhat better.

December 30th.—Pulse 104, temperature 99°, no vomiting, retains milk well.

2 P.M.—Pulse 100 and good temperature,

97½°. Gave morphine, rested comfortably except for great distention of abdomen.

6 P.M.—Temperature 97 2-5°, pulse 164, sank rapidly to 180 in half an hour; gave nitro-glycerine and digitalis; Cheyenne-stokes respiration.

8.30 P.M.—Temperature 97 2-5°, pulse 180, weaker, strychnia and morphine.

9.30 P.M.—Pulse 132, temperature 99 3-10°.

December 31st, 3 A.M.—Pulse 120, temperature 97½°. 7 A.M.—pulse 168, temperature 97 4-5°. Gave strychnine 1-20 gr., morphia ½. Great abdominal distension. 10 A.M.—pulse 160. 10.30 A.M.—pulse 168. Gave strychnine ½ of gr. 2.45 P.M.—pulse 118; complains of pain; strychnine and morphine. 3.35 P.M.—pulse 180. At 5.45 P.M.—pulse 200; gave strychnine, 1-30th of a grain. At 6 P.M.—pulse 188, temperature 97½°; his condition extremely unpromising and death expected every hour. At 9.45 P.M.—pulse 180, temperature 97 2-5; nitro glycerine, strychnine and morphine, great abdominal distention, heart irregular, and varying as much as 60 to 80 beats to the minute within space of half hour; first signs of mental aberration; retains milk and soft boiled egg. 12 P.M.—pulse 200, feet and legs cold to the knees, sleeping well. January 1, 1891, 1 in the morning—pulse 180, strech. and morph. 3 in the morning—pulse 160, temperature 89°. 9 A.M.—pulse 176. At 8 this morning a sloughing of the wound opened into the cavity, exhaling therefrom a fecal odor, mixed with other foul gases, discharged a large amount of blood, serum and pus. 10.30—pulse 172, a free discharge from wound. 4 P.M.—pulse 160, wound discharging freely.

January 2d, 7 in the morning—pulse 108. 11 A.M.—pulse from 60 to 100, temperature 98°; wound discharging less, condition improved. 3 P.M.—pulse 120, chill, temperature 99½°, restless and anxious, morphine. 9 P.M.—pulse 120, resting under morph., bowels moved with anema. January 3d, 8.30 in the morning—pulse 142, wound discharging more freely, decided fecal odor, bowels moved first time voluntarily. 10.30—wound dressed, followed by chill, with great restlessness and anxiety.

12.30 P.M.—pulse 212, pupils dilated, active delirium gave half grain morphine. (Suspected here an overdose of atropia

given by the nurse by mistake). 5 P. M.—pulse unsteady at 80, two beats with intervals, breathing 20 and labored.

January 14th, 8 in the morning, rested well last night, two stools during the night, pulse 72, temperature normal. 9 in the morning, pulse 72, temperature normal, less discharge from wound, conditions better. 9.30 P. M.—passed a good day, bowels soft and free from pain, temperature normal.

January 5th. Memoranda lost, but nothing unusual to-day.

January 6th. 9 A. M.—pulse 90 and good, slight cough, compound spirits ammonia prescribed, two stools, cheerful and bright. 8 P. M.—About the same, slight static pneumonia, discharge from wound less offensive, wants to eat, sat propped up in bed, large fecal discharge to-day, consistent, marked on one side with bloody mucus.

January 7th. Condition fairly good.

January 8th. Condition same, profuse sweat the night before.

January 9th. Condition same, removed paper wadding and necrossed tissue.

January 10th. About the same, a portion of two ribs exposed to view devoid of periosteum.

January 11th. Wound discharging very freely. 7 P. M.—Temperature 100°, pulse 108, seems not so well.

January 12th. 9 A. M.—Rested badly, temperature and pulse improved, sweated freely. 8 P. M.—Sweating during the day, no fecal odor from wound; temperature and pulse good, sloughing about over, with strong light can see into the abdominal cavity, wound looks better.

January 13th, 9 o'clock in the morning, looks and feels well, can see large intestine through opening in abdominal wall, can detect one shot hole in the colon. 6 P. M.—Pulse 108, temperature 101°, restless and anxious, gave strychnine.

January 14th. Pulse 124, temperature 102½°, at 9 o'clock in the morning, bad night, no sleep, no appetite, small hole apparently in mæso colon, discharging pus. 11 in morning recalled to patient, temperature 103½°, pulse 144, chill at 10.30, rochelle salts and strychnine.

January 15th. 9 in morning, condition improved. 1.30 P. M.—Temperature 101°, pulse 108, seems better, enema of warm water passed out readily through

the wound, morphine and strychnine. 6.30 P. M.—Temperature 101°, pulse 100, copious discharge from bowel. 9.30 P. M.—Sleeping soundly and breathing quietly.

January 16th, 17th, 18th and 19th. A gradual improvement, wound filling up slowly. 20th and 21st.—Periosteum beginning to cover exposed ribs, photographed wound to-day, temperature and pulse normal. From this time on improvement was gradual, but progressive, and on the fifty-first day he was discharged.

In the above notes only the more salient points of the treatment have been given, as a minute detail would become tedious. Each symptom was met as it appeared, and treated as indications demanded, keeping ever in view the fact that no set rules, but sound, surgical knowledge should be our guide in such conditions.

This was a more fortunate termination than could at any time during the first ten days have been hoped for. The man, first of all, had an iron constitution, capable of great resistance to depression, and he had hope even in his darkest hour, of ultimate recovery. The turning point, however, upon which his recovery hinged, was reached upon the day when his wound had sloughed sufficiently to permit discharges to pass through.

His condition from this time improved, and although relapses occurred, they were only temporary and soon passed away. This, then, brings me to a point the gist of which is drainage.

I was not misled in this case, however. We had talked of this and had discussed the propriety of opening the abdomen early, but believing the traumatism to liver, bowels, etc., to be so great that any interference would hasten dissolution, we preferred to wait. Had the wound been in the abdomen, away from the ribs, and out of probable reach of the liver, I should have urged the opening of the abdomen the first day, draining, if nothing else. True, this man recovered without surgical interference; nevertheless I think in all cases of wounds of the abdomen, where the cavity is penetrated, it should be opened and explored, intestinal wounds repaired and the cavity thoroughly washed out and drained. This is a position that nearly all advanced surgeons maintain. This case only serves to add that much more proof to the argument.

Since the introduction of the Murphy button, repairs can be quickly made in the bowel. The object of this paper will not permit a minute description of the toilet and surgical procedures in such cases, but I will say this much, that a surgeon who will let a man who is injured in the abdominal viscera die without opening the cavity, provided he sees him when not in collapse, and washing it out, repairing damages and draining, is remiss in his duty. We should not wait for alarming symptoms to appear, for when they come, the patient usually goes. Quick, clean work, small incision, even left unclosed if necessary, to save the patient from collapse, and ample drainage will often save life. In this case I do not think I did the best thing for my patient by waiting, although he pulled through without operations. I think now a drainage tube in his abdomen the second day would have saved him much suffering and risk to his life. Had I known at first that the liver was uninjured, I would have opened the abdomen the second day. The time that has elapsed before a patient is seen where the cavity of the abdomen has been penetrated has much to do in the prognosis of an operation. After 24 or 36 hours have elapsed, peritonitis or sepsis may, and generally have supervened if the bowel has been penetrated. An operation after these had set in is not so hopeful of good results as before such conditions have taken place. Hence, the earlier the case is seen the greater the possibility of good results from operation. There is more time at the disposal of the surgeon, and he can make a more careful and intelligent search for wounds of the viscera, with less liability of shock and collapse. When these conditions exist, an operation should not be denied; but here it should be limited to the real necessity of the case, and no attempt at ideal surgery made.

The abdomen should be opened quickly, under cocaine, if great weakness is present, and flushing with hot water, drainage, even without stitching the incision if necessary simply closing it with bandages and dressing, putting patient to bed and trying to save his life.

Life here is at stake, and everything should be held in abeyance to that one idea. Insufflation is not to be relied upon here, only in so far as it may aid in discovering the perforations in the bowel,

after the incision has been made, and during the operation to prove the integrity of the bowel. Even here the great distention produced in the bowel will often be a source of great inconvenience.

The cases shot in the knee joints and ankle were remarkable in that neither joint was greatly injured, one scarcely any, and the other so slight that it can hardly be detected. Pistol and rifle balls are more or less disinfected by the heat from the discharge, and possibly from their rapid flight in the air, and will often remain in the tissues harmless for years. From this fact I do not deem it prudent in injuries of this character to be zealous to find the ball and extract it. More injury is sometimes done by the probe and forceps than by the ball itself. The wound should be carefully and gently examined and all filth, dirt and clothing removed from in or around it. This can be done without great pain or inconvenience to the patient, and dressed antiseptically. Agnew recommends immediate search and extraction of the ball, if possible. This under some conditions is correct and is good surgery, but not under all is it advisable. Where a large ball from a larger pistol or rifle enters a portion of the body at such place as can be reached the traumatism is so great that it may be best at once to seek the ball at the risk of much pain and inconvenience to the patient. A large ball usually carrying so much material with it, such as clothing etc., that it is almost impossible to have the wound heal without supuration.

With smaller balls it is different. The wounds often heal without any trouble.

Of course good sense and judgment must often govern us in practice under varying circumstances. Shock must be considered, and the organ or portion of body affected will have much to do with the results of interference. I have often seen wounds made by small balls heal with scarcely any inflammation, giving no trouble afterwards, or later the ball attaining a position from which it can be easily removed. The history of these three cases demonstrates the fact that all such wounds need not be probed nor the ball extracted from them to save life or limb. Where the ball can be removed without violence or danger to the patient it should be done, otherwise it should be left to nature and antiseptic treatment.

ANEURISM OF THE ARCH OF THE AORTA.

R. M. WIGGINTON, M.D., WAUKESHA, WIS.

Frank M., aged about forty; American birth, Irish parentage; nervo-bilious temperament; not robust health; weight 140 lbs.; a dining-car conductor.

This gentleman came to me for treatment June 30, 1893, complaining of easy exhaustion upon exercise, slight difficulty in breathing and some pain and aching in the apex of chest, more particularly upon the right side. He was quite nervous, with an expression of alarm in his countenance.

Upon examination I found the valvular mechanism of the heart apparently a-right.

An impulse of the chest wall could be distinctly felt to the right of the manubrium of the sternum, especially within the intercostal spaces of the second, third and fourth ribs.

Upon auscultation, a distinct murmur *soufflé* could be heard over that part of the chest wall giving the greatest impulse to the hand. This sound corresponded with the systolic movement of the heart and resembled very much the diastolic, regurgitant murmur in disease of the aortic valves.

I told the patient that I suspected aneurism of the arch of the aorta, and directed treatment accordingly, which, in brief, was quietude, regard to diet, care of the stomach and bowels; and as medicine, ergot and iodide of potassium.

Under this treatment he soon began to improve, and on July 22d he came to my office feeling, as he said, quite well.

However, upon examination, I told him he was not well, and warned him against all excitement and labor, and not to return again to work until he saw me. Contrary, however, to my advice, he almost immediately resumed his work again as conductor on his dining-car. I did not see or hear from him again until September 6th, when I was called to visit him in Chicago. I found him at the Baptist Hospital. He was very much prostrated, and the disease, which was unmistakably aneurism of the arch of the aorta, was advancing rapidly. The tumor was rapidly

growing and protruding itself through the second and third intercostal spaces, and was very evident to both the eye and the touch.

Owing to his great desire to die at home, he was placed in an easy riding-car and brought home to Waukesha a few days after my visit. He rapidly went through all the phenomena common to this form of aneurism, finally dying October 11th from suffocation from the pressure of the tumor upon the trachea and apex of the lung and larger bronchi.

Post-Mortem Examination.

Fully two-thirds of the right cavity of the chest was filled with the tumor, the right lung having nearly disappeared through pressure and absorption. The aneurism was of somewhat irregular shape, conforming largely to the chest walls; in fact, the walls of the chest, the heart and the remnant of the right lung, together with the convex or upper surface of the diaphragm, constituted the boundary walls of the tumor, the crescentic layers being in part bound fast and intimately blended with the pleura, and could not be dissected off. The aneurism contained within its cavity about a quart of semi-clotted blood; and the walls, composed of crescentic layers, were in many places from one to two inches thick and firmly organized.

The aneurism had gradually burrowed through the walls of the chest, destroying the soft parts, the sternal ends of the clavicle, first second and third ribs, and a portion of the sternum, upon the right side, leaving the sharp ends of these bones sticking well into the isthmus of the tumor, which again spread out over the chest beneath the muscles and integument, like a large flattened orange.

The aneurism seems to have originated at the second segment of the arch.

I make this report simply for its statistical value.

COMMUNICATIONS.

A CLINICAL STUDY OF THREE CASES OF SPONTANEOUS HÆMO-
PHILIA IN BROTHERS.*JUDSON DALAND, M.D.,⁺ AND W. DUFFIELD ROBINSON, M.D., PHILADELPHIA.

The occurrence of three cases of hæmophilia in one generation, with the tendency so marked that in two of the brothers there was a fatal termination, justifies the addition of this report to the literature on the subject.

CASE I.—Boy, aged thirteen, living in Pennsylvania, at an elevation of 1800 feet. He was born at full term, and there was nothing unusual or remarkable during pregnancy or delivery, nor was there unusual bleeding. For eight months he was healthy and vigorous, and the skin was exceedingly clear, transparent and pale. At that time he was taken with cholera infantum, and was ill three months. His recovery was coincident with the first frost that occurred that year, to which climatic condition his physician ascribed his recovery.

As his mother was unable to supply nourishment he was fed by the bottle. During the last two weeks of his illness there was noticed a profuse petechial eruption over the abdomen, the back and the legs, and, to a less extent, over the arms. The eruption was described as rounded, non-elevated spots of the size of a pin-head, black in color, uninfluenced by pressure, evidently purpuric in character. There was no hemorrhage from any of the mucous membranes.

After this illness he remained well until about the age of five years, when he suffered from an attack of arthritis, affecting especially the elbows, knees and wrists, and this was accompanied by fever and acid sweats. The joints were swollen, red and painful. Relief was apparently obtained by the use of moist applications and the internal administration of salicylic

acid and salicylate of sodium. From the fifth year up to the present, the thirteenth year, he has averaged one attack of arthritis every two months, and the peculiarity of these attacks, which usually followed exposure to cold or wet, was that the symptoms appeared forty-eight hours after the exposure. Recently the attacks have been less frequent and less severe. Soon after the fifth year the arthritis was so severe that considerable ankylosis ensued, necessitating the use of crutches until the ninth year, when relief was obtained from Swedish movements and massage. At the age of eight he had an attack of measles, whooping cough and scarlatina, from which he recovered without any complications or sequelæ. Since the age of five he had, approximately, fifty attacks of hemorrhages from various mucous membranes, but there was no recurrence of purpura. His father has observed that prior to the hemorrhages there would be grinding of the teeth or the face would become flushed, and in consequence he was frequently able to foretell an attack. Most of the hemorrhages were nasal, but on two occasions hæmatura followed trauma of the renal region, and on one occasion hæmatamesis, from the same cause, applied to the abdomen. Later he accidentally bit his tongue, which was followed by oozing, and then free hemorrhage, which continued for seven days. To control the nasal hemorrhage many remedies were employed, but relief was only obtained when ice was applied to the nape of the neck and to the bridge of the nose, after large quantities of blood had been lost and when the physician in attendance thought death was imminent. For the injury to the tongue Monsell's solution was first used, which caused a cessation of the bleeding for a short time; but soon the coagulum was loosened by the oozing of blood of saliva, so that the hemorrhage was more violent than at the first, owing

*Read before the Philadelphia County Medical Society January 9, 1895.

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to the destruction of the tissue produced by the remedy.

Effort to check the hemorrhage from the use of intense cold produced by an ether spray proved valueless, as the spray could not be continued for a sufficient length of time, owing to the danger of ether narcosis and the repeated attacks of vomiting excited by the anæsthetic.

Compression by means of forceps was attempted, but owing to the site of the injury, which was on the side of the tongue, about two inches from the tip, it was extremely difficult to properly apply the forceps for any length of time without exciting gagging and vomiting.

Ice was applied for five minutes, until the wound was partially frozen; then it was removed for a similar time, and subsequently reapplied. This was continued for twelve hours, after which the hemorrhage ceased. At that time he showed all the evidence of extreme anæmia and caused his physician to think that death was imminent. Fluid extract of ergot was given in thirty drop doses every three hours.

After each of the hemorrhagic attacks there was nausea and vomiting. When the finger was cut it bled continuously for hours, and was only relieved when Monsell's powder was applied. His father distinctly recalls a number of occasions when this boy received a slight blow on some part of the body, so slight as not to produce even a bruise in a normal individual, which was followed by great pain, swelling, fever, and discoloration of the skin, showing that a considerable extravasation of blood had occurred. The greatest swelling was observed forty-eight hours after the reception of an injury, at which time the pain disappeared. The slow development of this swelling and discoloration of the skin would seem to prove that the more deeply-seated blood vessels were ruptured, from which oozing took place. The slight traumatism was able to produce this result owing to the extreme vulnerability of the walls of the blood vessels.

The patient has been always intensely nervous and sensitive, and frequently, after suffering from an attack of so-called articular rheumatism, he complained bitterly of pain in the joints from the vibration produced by anyone walking about the room, even though his parents were unable to detect any movement of the bed which he occupied.

A week ago, while visiting Philadelphia to receive massage for partially ankylosed joints he was observed to be extremely nervous, with choreiform twitching of the muscles of the face. That night there was grinding of the teeth, and the left edge of the tongue was bitten about half an inch from the tip, produced during sleep by the grinding of the teeth or from a slight convulsion. The following day there was a slight oozing, which continued for seventy-two hours, and increased until he lost about one ounce of blood per hour.

Many local remedies were tried, among which may be mentioned the use of powdered alum, antipyrine, Monsell's solution, and ice, but all proved valueless. Large doses of the compound syrup of the iodobromate of calcium were administered, and also ergot, oil of erigeron, and gallic acid; but these remedies were inefficient. On the sixth day of the hemorrhage I was given an opportunity of studying the case with his attending physician, Dr. W. Duffield Robinson. I found the patient to be well developed, his skin and mucous membranes were pale, the pulse frequent, feeble, and regular. The heart was slightly dislocated toward the right, the apex beat could be felt in the sixth interspace, but occupied a somewhat larger area than normal; the first sound was weak and the second sound sharp and accentuated. No murmur at the apex was audible, although a systemic murmur had been detected by Dr. Robinson at a previous examination. Over the aortic cartilage a sharp second sound was heard, and the pulmonic second was also sharp. Despite the high grade of anæmia present no hæmic or other murmur was audible. The examination of the lungs and abdominal viscera was negative. The skin was carefully examined, but only one purpuric spot was detected, on the inner surface of the left knee-joint, occupying an area having a diameter of three-fourths of an inch. It was supposed that this was due to a slight injury, as no other subcutaneous effusion of blood occurred. The right leg was slightly shorter than the other, and the left knee-joint was considerably enlarged. The muscles of the legs were moderately atrophied. The physiognomy showed that the patient was intellectual, bright, precocious, and the skull was capacious.

As several acts of vomiting had oc-

curred, and nausea and intense thirst were complained of, the administration of food and remedies by the mouth was suspended, and a nutritive enemata given, to which fluid extract of ergot was added. To secure relief from nervous and muscular excitement, and to insure quiet, large doses of paregoric were given per rectum, with 15 grains of trional to secure sleep. On the seventh day, from 6 A.M. till noon, the father, who had observed him continuously, reported that the amount of blood was trifling and that very little had been swallowed. During this time ice had been applied every alternate five minutes. His condition showed that a considerable quantity of blood had been lost during the previous twenty-four hours. It was observed that the pulse at the wrist numbered 72, while the heart-beats were 130 per minute.

Physical examination showed that the arterial system was partially empty and the veins collapsed. It was evident that the peripheral circulation was imperfect, as not more than half of the systoles of the heart were able to produce a pulse at the wrist. This condition of the peripheral circulation, the increase in the amount of fibrin that occurs after large hemorrhage, together with the muscular and mental quiet produced by opium, were counted to favor the formation of a coagulum, thus checking the hemorrhage. A minimum quantity of water was allowed, despite severe thirst, so as to prevent refilling of the almost emptied vessels with the concurrent increase of blood pressure and danger of expelling a slow forming clot. An examination of the blood showed that it was rather lighter in color than normal, liquid, and, notwithstanding the large quantities lost there was but little tendency to the formation of clots. This want of coagulability was and always has been a marked characteristic of each of these hemorrhages.

Microscopic examination of the blood showed an enormous number of very small microcytes, many of which were mere points. There were a few macrocytes and a moderate increase in the number of leucocytes. There were no parasites nor distorted red blood-cells, and crenation and rouleauxing were normal. The blood for this examination, which was obtained at the end of a protracted bleeding spell extending over a week, showed a

decidedly greater tendency to clot than on any former occasion.

The Thoma-Zeiss hæmocytometer showed 3,75,000 or 75.5 per cent, and Fleishl's hæmometer showed 62 per cent. of hæmogoblin.

The next day an examination showed well-marked evidence of quantitative and qualitative anæmia, no hæmic murmurs audible, although especially searched for; the blood from the prick of the finger showed a normal tendency to clot, and the hemorrhage, which had recurred, instantly ceased when Dr. Robinson made a local application of a 4 per cent. solution of cocaine. The stomach was more retentive, and there were evidences of beginning convalescence.

The condition of the blood gradually improved, and an examination made two weeks later gave the following results: The blood emerged from the puncture freely, much more so than from a healthy individual. It was of a good color and coagulated slowly. Microscopically the blood presented a normal appearance, with the exception that there were rather more large red corpuscles than are ordinarily seen. The microcytes had entirely disappeared. The color of the red cells was somewhat paler than normal. The Fleishl hæmometer showed 70 per cent. off hæmoglobin and the hæmatokrit showed 84 per cent. of red cells. There was no leucocytosis.

At this time the finger was accidentally cut, and hemorrhage continued for thirty minutes despite the application of ice. When a 4 per cent. solution of cocaine was employed the bleeding was checked immediately, and did not recur.

Family history: The first child was born prematurely and died shortly after birth. The second child was a boy, who was perfectly well up to sixteen months old, at which time he began to bleed from the nose, and developed hydrocephalus at the age of three-and-a-half years. The attacks of epistaxis from which he suffered were frequent, severe, and uncontrollable. He would almost bleed to death, and then gradually recover. There were no other mucous membrane hemorrhages, and at no time was there purpura. This child finally died of hemorrhage from the nose. The third child was a boy, who was perfectly healthy until the age of two years, when he died within forty-eight hours

from malignant scarlet fever. At no time was there any tendency to hemorrhages nor evidence of hæmophilia. The fourth child was a boy, who died of hemorrhage from the mouth at the age of eighteen months. He was anæmic, poorly developed, and an eruption was observed upon the skin. The first hemorrhage occurred when he began cutting teeth, and the quantity of blood lost was considerable. Later, when the molars were erupted, a fatal hemorrhage occurred, despite the use of every known means for its relief. The fifth child was a girl, who died at the age of three months without showing evidence of hæmophilia.

The mother of these children is one of a family of ten, all of whom were healthy. She has never shown any tendency to hemorrhages, with the exception that after the extraction of a tooth she observed that the amount of hemorrhage was greater than normal. This fact was well recognized by the dentist who would extract one tooth, but declined to remove a number at one time. The father has never shown any hæmophilic tendency, denies syphilis, and has always enjoyed good health. The maternal grandfather is said to have been "scrofulous," and had enlarged cervical glands, which might have been tubercular or syphilitic. With this exception the other members of this family, which are numerous, and may be traced to the third and fourth generations, have never known of a single case of the bleeders' disease. The father's family was also traced to the fourth generation, and the members of it were intelligent, healthy, and vigorous, not a single case of hæmophilia having occurred.

REMARKS.—The cases are particularly interesting for the following reasons:

1. That each of these cases occurred in brothers.

2. That they all showed the first tendency to hæmophilia at an early age, particularly while teething. The oldest patient's trouble began with epistaxis, following an attack of cholera infantum, which may have been a gastro-intestine purpura. The first case is also interesting from its associations with arthritis, from the statement that frequently the hemorrhage would occur in forty-eight hours after an exposure which would excite a coincident attack of arthritis and fever.

3. The fact that slight trauma would

produce extensive hemorrhage, proving that the blood vessel walls were remarkably fragile.

4. The extraordinary diminution of the coagulability of the blood.

5. The valuelessness of all the ordinary local remedies and agents for the relief of hemorrhage from the wound of the tongue, with the exception of the local influence of cocaine and ice and the internal administration of the fluid extract of ergot. We are disposed to attribute the greatest influence to the enormous loss of blood, by which not only was the fibrin increased, but also the peripheral circulation was slowed, so as to allow of the gradual formation of a thrombus. The use of cocaine as a local hæmostatic was suggested by Dr. W. Duffield Robinson. The remarkably brilliant results obtained in the first case lead us to hope that similar good may be obtained in other cases.

6. The occurrence of marked flushing of the face as a precursor of an attack of hemorrhage.

7. The opinion of the father that the intense nervous excitement produced by these violent pains in these attacks of arthritis may be a cause of epistaxis.

8. The greater frequency and violence of these hemorrhages since removal from an altitude of 1,800 feet to that of 2,200 feet, and the consequent deduction that hæmophilics should be removed to the sea level.

9. The occurrence of repeated attacks of acute arthritis with intense pain, redness and great swelling in association with fever and sweating, which are so frequently observed in hæmophilics, and the fact that they were erroneously diagnosed as attacks of rheumatism. The want of coagulability of the blood at the time of these acute outbreaks, their occurrence forty-eight hours after exposure to cold or damp, the frequent coincident occurrence of hemorrhage, and the absence of endocarditis, are all points in favor of the supposition that these were not attacks of rheumatic arthritis, but were hæmophilic in origin, perhaps due to the effusion of blood into the joints.

10. The second case is interesting from its association with hydrocephalus and the occurrence of death from epistaxis.

11. The third case illustrates the importance of teething in producing the first manifestations of hæmophilia, and shows how death may occur from this cause.

LOCAL ELECTROLYSIS AND ZINC-AMALGAM CATAPHORESIS IN MALIGNANT AND NON-MALIGNANT TUMORS.*

G. BETTON MASSEY,† M.D., PHILADELPHIA.

Before reporting the three cases on which this new treatment of morbid growths is mainly based I must explain what I mean by local electrolysis and zinc-amalgam cataphoresis, and also advance reasons for my belief that these methods either separately or together present important advantages over cutting operations in certain cases of benign vascular growths and incipient cancers.

Local electrolysis means simply that the electrical decomposition of the tissue salts is confined to a localized area by the approximation of the poles. If both poles of a galvanic current be placed in the morbid tissue quite near each other the bulk of the current will be concentrated within the portion of tissue immediately between them, and but little will traverse the outside healthy parts. In practice they should not be further apart than from a half to one inch, though this depends entirely on the strength of current to be used and the size of the growth. So placed, an enormous current may be employed to dissolve a morbid tissue without affecting surrounding tissues, the parts having been chilled by a spray, or otherwise rendered anesthetic, if sensitive. The surgical possibilities of such currents are quite remarkable. All the salts and liquids of a given growth lying between the points become a prey to such a current, the watery contents being turned into oxygen and hydrogen gases, and the complex salts into solutions of acids and alkalis. This is, of course, attended with a material rise of temperature, but nothing like charring. If the tissue subjected to the process is soft and vascular, or juicy, there will be very little left between the poles after the gas has been given off but the acids and alkaloids dissolved in a turbid liquid remainder. If the tissue is tougher and more fibrous a gristly residue

will be found which can be detached or left to be detached by nature.

The strength of current required to destroy tissue in this way depends altogether on its concentration at the active spot. A minute reproduction of the process occurs when we apply but two or three milliamperes to the papilla of a hair sheath, or to a mole on the skin; but to completely dissolve tissues between two or more needles a half inch apart requires at least four hundred to seven hundred milliamperes.

Whether this portion of my method has any advantages over a cutting operation in removing malignant or non-malignant external growths depends upon circumstances. It is clearly inapplicable to any growth within the body unless it is situated in a drainable natural cavity, as a considerable quantity of detritus must drain away. It also presents the disadvantage of not permitting healthy tissues to be united at once over the seat of the removed growth, a procedure, however, that is often of doubtful utility, as it frequently covers up portions of the disease that failed to be removed. The advantages of the method over the knife are, on the other hand, by no means inconsiderable. It is absolutely bloodless, no matter where applied, thus enormously conserving strength after operations notoriously bloody; the edges of the undestroyed tissue remain non-absorbent, lessening risk of sepsis; and finally there seems to be some property in the galvanic current to cause a retrogression of the whole of a benign growth even when but a portion is directly acted on, as in the Apostoli treatment of fibroids and the ordinary treatment of moles and other small skin tumors.

If the growth be a benign one the application described will probably cover the whole of the active treatment. If it be malignant, on the contrary, the second portion of the method—zinc-amalgam cataphoresis—is employed, a procedure of great value in radically removing all re-

*Read before Philadelphia County Medical Society, January 9, 1895.

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maining traces of a still localized cancerous growth.

Zinc-amalgam cataphoresis is electrically mono-polar, the single active electrode, which is always positive, being applied to the cavity left by removal of the greater portion of the growth, while the indifferent or negative electrode, in the shape of large conducting pads connected together, is placed on any convenient portion of the body. The active electrode is a freely-amalgamated zinc surface of one or two square centimetres area, which is held successively against all portions of the bottom and edge of the excavation. From 150 to 300 milliamperes are sufficient, the pain being controlled by cocaine in solution placed in the excavation beneath the electrode, to be conveyed into the tissues simultaneously with the nascent oxychloride of zinc and mercury which is dissolved from the electrode by electrolysis.

By this procedure we search out and destroy all remaining spurs and paths of infection in the contiguous unhealthy and healthy tissues, the current seeking vascular and cellular paths of less resistance by preference in its journey to the other pole; and to the lethal effect of the current we add the well-known lethal effects of nascent mercury and zinc compounds. The surface of the amalgamated zinc electrode is consumed in the process—the mercury, as well as the zinc—producing a mixed infiltration of the immediate polar region that is readily detected by the eye. Low organisms in the immediate neighborhood of the electrode quickly succumb, and the antiseptic value of the procedure is shown in the correction of any odors that may have accompanied the cancerous discharge. That the action is not confined to the immediate neighborhood of the electrode was well demonstrated in one case in which the zone-like base of a cancer was observed to lose its induration and shrink in places at least an inch distant from the contact point.

The applicability of the first portion of the method—local electrolysis—to a benign growth in the following case:

CASE I. Large intra-uterine cystic fibroid destroyed piecemeal by repeated applications of bipolar local electrolysis, resulting in a satisfactory cure.—Mrs. D., a nullipara, aged thirty-nine, was referred to me by Drs. Hemminger and Bixler, of Carlisle,

Pa., in September, 1892. Six or seven years previously Dr. Hemminger had discovered an intra-uterine growth, the lower portion of which later was found to be projecting from the dilated os, giving rise to pain and hemorrhage. Efforts to remove the growth by the écraseur were made by Dr. Hemminger, but, owing to its extensive internal attachment and great vascularity, only the projecting parts were removed. When the case was admitted to the Sanatorium the tumor was nearly the size of the adult head, the upper limit being even with the naval. The mass was symmetrical in shape, soft and semi-fluctuating. Examination showed the os fully dilated, through which projected a portion of the tumor the size of the foetal head. Around this projecting mass several fingers could be swept, showing freedom from adhesion to the uterus for three inches anteriorly and about six inches posteriorly. The mass was evidently a vasculo-cystic fibroid situated within the cavity of the uterus and attached to the uterine walls throughout three-quarters of its periphery. It was spongy, but very tough, bled easily, and gave rise to a copious watery leucorrhœa. The conditions presented by this growth, particularly its cystic degeneration, absolutely contra-indicated the ordinary Apostoli treatment of fibroids on account of the danger of producing sepsis. Accordingly attempted its removal by morcellement, using the scissors, dull scalpel and fingers, but was compelled to desist, owing to the frightful hemorrhage. In this dilemma the possibilities of localized destructive electrolysis occurred to me, and it was begun by the use of a bipolar instrument having four prongs, two to each pole. These prongs were buried in the projecting portion of the tumor, and 700 milliamperes turned on for six minutes. This dissolved quite a hole in the morbid tissue, making a spot too hot for the finger. The procedure was repeated daily as fresh portions of the growth were pressed down by the contracting uterus, without hemorrhage or marked discomfort, the possibility of sepsis being guarded against by a continuous douche for an hour or more after each application. Three months were consumed in the eradication of the tumor in this way, though it doubtless could be done in a second case in a third of the time, the final examination showing

nothing but a roughened spot on the anterior wall of the contracted uterus. External measurements now showed the upper limit of the uterus two and one-half inches below the naval. The cavity was capacious.

A letter from Dr. Bixler dated February 26, 1894, stated that the patient was quite restored to health, complaining only of prolapse of the vaginal walls, the latter doubtless due to the descent into the pelvis of a uterus that had so long been within the abdomen. The cavity was still large, and there was some thickening of the walls on both the right and left of the uterus. The os would only admit the first joint of the finger.

In November, 1894, two years after the patient's admission, her husband called and reported her as in good health.

CASE II. *Sarcoma of tonsil and soft palate cured by local electrolysis, followed by zinc-amalgam cataphoresis.*—W. H. L., blacksmith, aged thirty-eight, was also referred to me by Dr. Hemminger, February 17, 1893. Five years before he suffered from an abscess of the ear. Two years before being seen by me the left tonsil was found to be the seat of a tumor. He had recently been sent to the Hospital of the University of Pennsylvania, where, he says, malignancy was diagnosed and an operation proposed, which he declined.

A tumor about the size of a goose egg filled the pharynx, involving the tonsil and soft palate, and threatening suffocation. Liquids could be swallowed with much difficulty.

The patient was placed on monopolar negative punctures, 30 to 60 milliamperes, daily. But little progress being apparent at the end of a week, the parts were cocaineized and subjected to bipolar local electrolysis with from 200 to 350 milliamperes, on two occasions. The separation of the eschar that resulted was accompanied by considerable pain and reaction, but as the place healed it was found that but little of the tumor remained. He did not return for further treatment until more than a year had elapsed, during which he seemed to be well. At this time, however, a renewal of the growth occurred, and it was about the size of a peach-stone when he was readmitted to the Howard Hospital for further treatment. During this second treatment zinc-amalgam cataphoresis was mainly

employed, the treatment lasting six weeks and being carried deeply into the base of the growth. A complete cure resulted, and at an examination of the parts six months later a healthy scar only was to be seen.

CASE III. *Inoperable carcinoma of the groin greatly relieved by zinc-amalgam cataphoresis; death from erosion of femoral artery and gangrene.*—Colonel H., aged sixty-two, was sent to me by Dr. A. W. Knox, of Raleigh, N. C., in the summer of 1893. One year before he had noticed a lump in the left groin. On admission to the Sanatorium the tumor was the size of a large walnut, of a bluish color, and firmly attached by a broad base to the deeper parts of the thigh. It was situated just below Poupart's ligament and lay immediately over the femoral artery and vein, and was apparently attached to the latter, though the exact location of the artery was uncertain owing to the general induration.

At the patient's request it was decided to make a tentative use of electricity. The central and projecting portion was accordingly destroyed by local electrolysis, making a slight cavity into which a solution of cocaine was poured. Into this the blunt amalgamated zinc electrode was pressed and daily applications of the cataphoresis made, with currents averaging 150 milliamperes. The immediate effect of the application was to whiten the edge of the growth in contact with the electrode, the whitened coating peeling off later. The indurated ring and base that now represented the growth was about three inches wide. Under constant applications the whole of this was gradually destroyed and replaced by healthy granulations, except the center of the base, where the close proximity of the large artery rendered the applications unwise. At the end of three months the diseased area had been contracted to the size of a five-cent piece, but this was a deep cavity extending down to the great vessels, where it was thought to be unsafe to apply the current. The patient had increased twenty pounds in weight, and though brought to the Sanatorium on a stretcher, was now able to walk a half mile or more. During the continuance of this improved condition, however, the artery suddenly gave way one day at the bottom of the untreated spot. Drs. Thomas S. K. and T. G.

Morton were called in and tied both artery and vein, which were found thoroughly infiltrated with cancerous material for some distance upward into the abdomen. Gangrene of the limb supervened, followed by death two weeks later.

An estimate of the value of the method in these three cases must be comparative, as cases similar to each are usually subjected to other methods, removal with the knife being the favorite. Hysterectomy in the first case would, of course, have involved removal of the ovaries also. Both this and removal of the uterus itself were avoided entirely, no natural structures be-

ing even injured, and the time required in the treatment was probably not longer than that necessary to recovery from the effects of abdominal section. In the second case the bloodless removal of a sarcoma of the palate was followed by a treatment that I hope will render the patient less liable to a return of the disease. The third case was, of course, a failure to cure or to preserve life, yet it is thought that life was prolonged by the very evident curtailment of the growth and improvement of health. Comparisons were hardly possible, however, as an operation had been refused by one surgeon as useless.

ILLITERATE BOORS IN THE PROFESSION.

The *Texas Health Journal* provides its readers with the following treat:

The Cheap-John medical colleges and reckless medical examining boards of the country are daily turning out large numbers of ignorant fellows with the title of M.D., who are a burning shame and disgrace to the noble profession of medicine. This is not all. They are dangerous to the public welfare. Who is to blame? The colleges and boards who, for a paltry sum, permit these fellows to roam at large. These colleges and boards are always "ethical." Certainly each and every one must endorse the code of ethics or he is not eligible for the position in a college or on a board. I give below a letter sent me by Dr. H. Riley, of Bowie, Texas, and written by one of these boors to the postmaster at Bowie. It is only one of many such letters sent the *Journal*. The *Journal* occasionally publishes such letters with the hope of raising the standard of medical education by holding colleges and boards up to shame, as they deserve. The following is a verbatim copy of the letter written from Memphis, Texas, to the postmaster at Bowie by an alleged "doctor:"

MEMPHIS Hall co texas 12-2-98

MR. POSTMASTER AT BOOEY

Please tell me what the popolation of yor town is and how meny Dos thair is thair and is the so-ronnding coontrey a fertill coontrey or not and eff yo have soft water & doo yos Rais corne & oats & cotton il not ask aney more questions as. i may walrey yos with questions. I am in the Pan handle trying too dispose of some cattle after so doo-ling i am Ready for .a. Location whair thair is sChools .& Churchis . i am 51 years of age have a

wife & 1 grone sone. & 3 small boys all too school. i am from Lea. co. Mississippi hop yo will anser this and oblige at once

P. S

i am not very ancios to Locat in town i am a. graduat of Medison and sergery so acknowledg By the state Board of Texas

Respectfolly,

Dr. T. G. H.

An Early Grave Complication of Pharyngeal Diphtheria.

Aufrecht, *Therapeutische Monatshefte*, calls attention to a particular form of diphtheria of the pharynx, which despite its limited local extension, rapidly kills the patient in two or three days. It has been held that these almost fondroyant cases were to be attributed to a grave infectious myocarditis. Recently, however, the author has observed three cases of this kind where the autopsy showed no trace of myocarditis, but a sub-acute nephritis. The author, therefore, insists upon the importance of systematic examination of the urine from the beginning of diphtheria, even when no symptom points to a renal lesion. The symptoms observed in these cases have been very great frequency of pulse, a semi-comatose condition, delirium, high fever, and marked albuminuria. Guided by these cases the author has been able in a fourth case to combat this nephritis in the beginning by the administration of large quantities of alkaline and saline water (Wildungen) for the purpose of increasing diuresis and relieving the choked-up kidneys.

THE MEDICAL AND SURGICAL REPORTER

ISSUED EVERY SATURDAY

Address all communications to P. O. Box 843, Philadelphia, Pa.

HAROLD H. KYNETT, A.M., M.D.
Editor.

RODERIC C. PENFIELD
Publisher.

Editorial Offices, 1026 Arch Street, Philadelphia, Pa.

Entered as second-class matter at Asbury Park, N. J.

TERMS:—Three Dollars a year in advance. Sent four months on trial for \$1.00.

REMITTANCES should be made payable to the Publisher only, and should be made by Money Order or Registered Letter.

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SATURDAY, MARCH 16, 1895.

EDITORIAL.

LARGESSE! LARGESSE!

THE INSPIRATION OF PROFESSIONAL PHILANTHROPY.

With the assembling of each new legislature of this State, there is an invasion aptly described by the old nursery rhyme:—

"Hark! Hark! The dogs do bark.
"The beggars are coming to town.
"Some with rags, some with 'jags,'
"And some with silken gowns."

On every hand is the cry for "Buck-sheesh!" and appeals for "Largesse!" That the almoners of the common-wealth have been bewildered, befuddled, cajoled or convinced is demonstrated by the official records, which show an undue proportion of the public bounty bestowed upon undeservers, to the great detriment of the truly needy. Reference is made to state appropriations for private hospitals, particularly to those of this city, and the unfortunate provisions for some contemptible productions of *Professional Philanthropy*, while the necessities of the State's own wards are barely supplied.

Our friend, *The Medical News*, accept-

ing the risk of making itself to be disliked by interested parties, presents some interesting figures, with some strong editorial comments which we are glad to repeat and to endorse:

"Before the Pennsylvania State Legislature the various charitable institutions have laid their applications for appropriations for the years 1895 and 1896. The amounts asked for by hospitals of the third class, that is, hospitals owned and controlled by private corporations, are

For the year 1895.....	\$1,446,311 93
1896.....	1,019,500 00

"About one-half of this is for new buildings or for removing debts of mortgage, and one-half for maintenance.

"When an individual endows a bed in a hospital he has a right to send anyone there, at any time, to occupy such a bed. When the State gives a grant of \$50,000 it virtually endows ten beds, yet does not possess any right to such beds. The only place a poor incurable tuberculous or other invalid needing the attention a hospital can give has a right to go is the

Philadelphia Hospital, and here, alas, there is but little room for him.

"The private hospitals obtain their appropriations only through strong lobbying, and if a charity has a "pull" it can get almost anything it wants.

"A few individuals organize a hospital, largely and principally for their own benefit, and then obtain appropriations from the Legislature, by which they can erect costly buildings and bring themselves into prominence.

"If institutions are to receive State aid, they should be under State control, and where it is found that over-lapping exists, that one institution can do the work of two, the other should be dropped from the State list.

"The following Philadelphia hospitals are represented in the applications:

let these be managed by the State as the hospitals for the insane are.

"We hope that the medical profession of Pennsylvania will enter a protest against indiscriminate grants to private charities, and ask that State moneys be applied to institutions under State control."

THE REPORTER agrees with these views.

There is neither wisdom nor propriety in delegating the expenditure of public funds to persons or institutions not under the controlling supervision of the State authorities—not even accountable for the use made of the people's money.

We do not in any sense condemn private hospitals, but we call attention to the broad distinction between hospitals pri-

Name of hospital.	Amount asked for 1895.	Amount asked for 1896.	Amount received in past six years.
Hahnemann.....	\$67,000	\$50,000	\$73,546
University.....	50,000	50,000	135,000, 4 yrs.
" Maternity.....	5,000	5,000	
" Veterinary.....	5,000	5,000	30,000, 4 yrs.
St. Timothy's.....	12,500	12,500	7,000, 3 yrs.
Kensington, for Women...	13,500	5,000	5,000, 2 yrs.
Polyclinic.....	25,000	25,000	87,000
Jefferson.....	50,000	50,000	130,000
Woman's.....	25,000	25,000	25,000
Howard.....	2,500	2,500	
Medico-Chirurgical.....	82,500	82,500	170,000
Rush Hospital.....	75,000	75,000	
West Phila., for Women...	12,500	12,500	
Women's Homeopathic.....	17,400	17,400	67,000
Children's ".....	17,000	17,000	8,000, 2 yrs.
St. Christopher's.....	5,000	5,000	
Philad'a Lying-in Charity..	7,500	7,500	15,000
Southeastern Dispensary..	2,500	2,500	
Orthopedic.....	23,500	23,500	30,000
Maternity.....	8,000	5,000	15,000
Gynecean.....	20,000	15,000	35,000
Wills Eye.....	10,000	10,000	40,000, 4 yrs.
Samaritan.....	30,000	30,000	
German.....	10,000	10,000	40,000, 4 yrs.
Hospital for Incurables....	20,000	20,000	

"It will be noticed that all of the foregoing institutions, with the exception of Wills Eye Hospital, which is in trust of the city, are strictly private concerns. They are not obliged to render account to any public official. The funds received may or may not be applied to the purposes for which they are asked.

The Governor has but recently stated that economy is necessary in the affairs of the State. Let the Appropriation Committee turn to the private hospitals first.

"We want a State Hospital for Epileptics and two or three for tuberculosis, but

as popularly understood, and private as defined by the Legislature. The former are provided and conducted by one or more individuals entirely at their own personal expense; the latter are enterprises originated and manipulated in the interest of individuals but entirely without expense to them personally. These private hospitals are usually corporate bodies professedly dependent for support upon voluntary contributions of the community.

They are not necessarily unworthy of aid. Indeed, many of them are deserving of most generous support, but it should not come from public funds unless the State is able to compel the proper expenditure of the money granted.

However, since private hospitals have been and will be afforded aid by the State, the keenest discrimination should be made against the speculations of Professional Philanthropy.

A prominent member of the Lower House is authority for the statement that the entire amount at the disposal of the present Legislature will scarcely exceed \$9,000,000. Of this sum five and one-half millions must be devoted to the public schools, and out of the balance must be paid all other expenses whatsoever, incurred by the State Government, including such appropriations as may be made to applicants for State aid. Under the circumstances there would seem but little chance for helping private institutions, although these institutions when applying for stated amounts fully expect a reduction of from thirty to fifty per cent., and provide for this discount in making their application, so that if the anticipated discount is made they will receive all that was really hoped for when making application.

Before any application of the third class is entertained, the institutions that are directly managed by the State should be liberally provided for; if anything remains, those institutions over which the State has partial control should receive consideration; and in the improbable event of a surplus, careful attention may be given to the private hospitals. Under no consideration should assistance be granted to the projects of Private Philanthropy.

The list above, which we quote, furnishes two excellent specimens of applicants, who, however worthy in other respects, are not at all deserving of aid from the public

treasury. It is not necessary to specify these hospitals by name; many of their disqualifying conditions apply equally well to others here and in other parts of the State. One is an habitual parasite; the other is a perfect type of Professional Philanthropic invention.

In the first instance, the hospital is one of three distinct divisions of a corporation whose charter authorizes and empowers it to maintain the hospital; a home for the support of the aged, male and female, of a specified nationality; and an institution for the maintenance and education of a religious order; and to receive donations, legacies, etc., etc., and apply the same to the *general* corporate purposes without distinction. The institution, unquestionably, is sectarian. Its by-laws require all business to be transacted and records to be kept in a foreign language. Its patronage is very extensive among a well-to-do class of people. It makes ample provision for its own support by a system of initiation fees, membership dues, fees from patients, and subscriptions of individuals and associations, and, quite recently, it has incurred the displeasure and distrust of the profession by advertising in the daily papers to establish and conduct the vicious "contract" system, which has so impoverished the medical profession abroad. This institution, which is sectarian, which has sufficient means to build, endow and support from a common income, two other institutions of considerable magnitude but entirely foreign to the purposes of a hospital—this *private* hospital has begged and during a very few years obtained alms from the State amounting to thousands of dollars, and for no reason comprehensible outside of the politician's consulting room. Having secured money so easily, the institution naturally comes back for more. We violate no confidence in stating the accepted opinion that, once on the State beggar's list, an institution will never be refused absolutely (or deservedly), so long

as there remains any of the people's money or credit.

As for the second outrage upon decency, the Professional Philanthropy Pudding, the explanation is very simple in view of the customs of political courtesy. But the premeditated misprision of legislative duty is enormously aggravated when to ineligibility there is added the fact that the applicant is the embodied presentment of Professional Philanthropy.

It is not possible to give a definition of Professional Philanthropy which would be, at once, brief and sufficiently comprehensive. One conception would be, the art of requiring reputation for the love of fellow-man and for devotion to his relief and salvation, by appropriating to self all credit for the results of efforts wholly of others who are too modest to blow their own trumpets and whose work can be patronized and applauded without any self-sacrifice or personal expense. But this is merely a single phase. Professional Philanthropy is a congeries of characteristics or traits, no one of which is peculiar to this form of mental and moral obliquity, and all of which rarely or never occur in the person of any one individual Professional Philanthropist. There is, however, one constant feature—the absolute lack of self-sacrifice. It is the constant predominating of this quality which characterizes all genuine philanthropy. Herein is the distinction between philanthropy and Professional Philanthropy.

Perhaps a sketch, drawn from life, of an eminent Professional Philanthropist will give the best definition of the term:

Male, in the prime of life; moving in the swellest social circles—the froth; a pillar in the church on Sundays; rated high financially; director in several of the solid moneyed corporations of the community; wealthy by inheritance, by business ability, and by acquirement; prominent in public affairs not requiring personal expense; manager, trustee, governor, or

what not, in a variety of charitable institutions; controlling the affairs of at least one richly-endowed charity (including its finances, cash, bonds, stocks, and real estate, its work, its policy, its officers, its elections, and even the opinions of the boards of alleged managers). So far one might be in fact philanthropic save for a little too much self-consideration, but now the modifying qualities which distinguish the Professional Philanthropist obtrude themselves very offensively. For instance, the founder and endower of an institution, when devising his entire property in trust for the realization of his efforts to benefit the unfortunate and needy in the field of his life work, evidently took it for granted that the men he chose to carry out his intentions were as humanely disposed as himself (or should be, since it would cost them nothing but a little thought and time to do a great amount of good), for he made no provision for paying his trustees' salaries for their services, but specifically desired that such service be without remuneration. It required an amendment to the charter to accomplish it, but Professional Philanthropy set a cash value upon its name and service and secured the necessary change, at least for some offices, and then secured the offices. In the course of financial affairs, securities depreciated and some retrenchment became necessary. This was easily accomplished in such manner as employers are accustomed to reduce expenses in business by retrenching the incomes of subordinates and employees. So that, as the matter now stands, Professional Philanthropy, working possibly twenty-four hours during the year, has a money value far in excess of that of the services rendered by the practical executive of the whole institution, who works twelve hours a day three hundred and sixty-five days, and averages perhaps four hours a night for three hundred and sixty-five nights, and who bears the responsibility of the details

of management as well as the cares and worryment of the professional duties. Again, the "nominal" remuneration for shedding the light of his Professionally Philanthropic countenance on the sorrows and burdens of the unfortunates who come within range is munificent compared to the sum total given to all charities combined, so far as is discovered by the reports of the various treasurers made public. In the few instances where it occurs, its name is displayed in bold faced type, so to speak, and leaves the impression that one dollar wrung from Professional Philanthropy is a greater triumph for good than one thousand dollars dropped from the free hand of Generosity.

A lawyer might explain away this suggestive fact, but he would find it hard work to rub out the adjective, Professional, from the degree of the Philanthropist who regards the beneficiaries of a trust as a species of mankind peculiar, grading socially lower than the swiftly changing retinue of servants in his own home, and as singularly unsuited for any comforts or conveniences not found in the back kitchen or stable loft and, more than all, treats them so.

He is a Philanthropist for what there is in it, not for what he puts in it.

Four or five such humanitarian, associating themselves with one philanthropist for the sake of the money necessary to start with, incorporate and launch a new charity in the shape of a hospital. The inspiration of the act is generally found to be a desire to provide occupation for some incompetent but dependent relative or other social equal, whose light otherwise must be hidden under a tea-cup. The confidence manifested will be found due to access to the public treasury provided with the assistance of some one who has been there before, and who is bound to see that they get there too. Once successful in reaching this source of support, Professional Philanthropy has demonstra-

ted its power for doing good, by providing subsistence for at least one incompetent, who otherwise might be thrown for support upon the county authorities. This demonstrates not only a kind heart, but a level head, for it is evident that it is more economical for the State to support a pauper than for the County to do so, the tax being less per capita.

This is a brief and crude summary of the character of a protege of Professional Philanthropy which already has disposed of scores of thousands of the public's dollars without rendering any visible consideration.

If the Legislature is able to overcome its blind devotion to political courtesy long enough to refuse an appropriation to this bottomless pit which can never be filled, either the Professionally Philanthropic sponsors will have to return more of their "remunerations" from charities to charity, or the long-felt want for which this hospital was provided will be found fully satisfied, the institution will lay it down to pleasant dreams, and suffering humanity will find in its closed doors cause for rejoicing that, in one instance, true philanthropy has finally triumphed.

Two Easy and Delicate Tests for Albumin in Urine.

Dr. C. Fouchlos (*Progres Medical*) recommends two new tests for albumin in urine, for which he claims utmost delicacy and absence of any possible fallacy.

1. Add to the suspected urine a few drops of a one per cent. solution of corrosive sublimate; in case of turbidity, add some drops of acetic acid. If the turbidity persists it is due to the presence of albumin.

2. Take 100 cc. of a ten per cent. solution of sulpho-cyanide of potassium, and mix with it 20 cc. of acetic acid. Add a few drops of this mixture to the urine. If albumin is present in small quantities, an immediate turbidity will ensue; if in larger quantities, a heavy white precipitate will appear.

ABSTRACTS.

"AURAL MASSAGE."

Laurence Turnbull, writing (*Med. News*) of its value in the treatment of various diseases of the ear, says:

"Aural massage," by alternately moving backward and forward the auricle with the opened and closed meatus, by the hands, with associate movement of the sterno-cleido-mastoid and occipital muscles, has been recommended and practiced for some time for the purpose of giving freedom to the membrana tympani when adherent and thickened, and with some benefit, also, in certain diseased conditions of the other parts of the ear. Another method is to open and shut the orifice of the canal by pressure on the tragus at its lower part, closing the meatus with the thumb or forefinger; the force may be increased by greasing the canal with vaseline alone or with medicated ointments or oils. There is also a more perfect method of massage, by condensation and rarefaction, by means of the instrument of Siegle, which has for years been employed in the examination of the membrana tympani. It resembles the ordinary hard-rubber speculum, but is more elongated, and its outer opening is fitted with an oblique plate of glass. A small nipple projecting from its side marks an opening to which is attached a small rubber tube ending in a mouth-piece. The instrument is used by inserting the small specular end into the meatus as far as possible (best covered with a section of rubber tubing and anointed). The mouth is applied to the end of the tube, or a small syringe, to exhaust the air, may be employed, or else an elastic valve bulb can be used; through the glass the movements of the membrana can be watched. All these plans were very unsatisfactory and could not be graded until Dr. Chas. Delstanchè, of Brussels, gave us two improved instruments, only a brief description of which I can give at this time, as they require cuts to fully illustrate them.

Delstanchè's instrument for massage, or as he terms it "masseur," consists of a metallic tube enclosing a smaller tube of

metal which acts like the valve of a syringe. The recoil of the valve which produces the aspiration and condensation is accomplished by a spiral spring between the valve and the bottom of the metallic tube. The inner tube is graduated in fifths, so that one may determine by a key the amount of power to be employed. Care is necessary in the use of the instrument for fear of rupturing the drum-membrane, causing a great deal of pain, a flow of blood and an interference with the operation. In order to better condense the air in the tube the nipple-like process is covered with rubber. It must then be withdrawn from time to time, but the to-and-fro motion may be kept up for some time to advantage, always examining its effects upon the membrana tympani. The other instrument is named by Delstanchè the "rarefacteur." It is provided with a double valve, and has an advantage over the other instrument in that, without removing the stop-cock, one may alternately condense and rarefy the air in the external meatus, or rarefy it alone. It is much more powerful, and with it we can rarefy the air in catarrhs of the middle ear and Eustachian tube, in which there is a sunken membrane, or break up adhesions between the membrana tympani and inner wall of the cavity of the tympanum, or after paracentesis of the membrane, when we have fluid products to be removed.

Several other instruments have been brought forth of late for the same purpose, differing in name, but all of them having the same object in view; they cannot be employed alone, but as an aid to other means, for although they are of value when properly applied by the scientific and aural surgeon, they are of limited application, and like all efficient agents can do harm as well as good.

One of the most recent of these instruments has been termed the "vibrometer," which combines massage by sounds, both mechanic and electric, with exhaustion or rarefaction, with a series of musical strings. The first instrument employed was like a violin; the second like a guitar;

the last in the form of a banjo. This latter instrument is termed a vibrometer. A medical friend made a series of experiments with the first one hundred cases* of tinnitus aurium and deafness, but only two per cent. were successful in relieving the patients, and my own efforts have been as resultless. Ten cases out of one hundred will be reported. These will be sufficient for our purpose; they have not been selected but are like the ordinary cases that present themselves to the aurist every day for treatment.

The following are the rules for the use of the instruments employed, after making a careful diagnosis, and correcting, as far as we are able, defects that would interfere with the successful use of the instrument:

The length of the sittings is from five to twenty minutes, and the number two a week. For tinnitus, like the ringing of bells, the chirping of insects, the singing of birds, the sound of escaping steam, try the highest notes of the instrument, say twenty thousand vibrations a second. Draw the fine musical string of the vibrometer very tight, and shorten it with a clamp to obtain high notes; to obtain low notes elongate the strings. When the tinnitus gives a deep sound like a sewing machine, the humming of a saw-mill, and for all low-pitched sounds, use the low-toned strings, say of forty vibrations a second, and the pounding arrangement with the so-termed exhausting wooden plate. When the tinnitus is high, increase the vibrations up even to thousands. When the right pitch has been obtained the patient should only hear one sound, and the noises which he hears continually should be gone. In the case of a physician who suffered with constant tinnitus he was able by the use of the vibrometer to get rid of it, but he required the constant use of the instrument, as the tinnitus would return.

There are three other methods now in use for stimulating the deaf ear, all of which I have examined and employed alone with no better success: namely, the vibrophone, audiphone, and the musical-box and pressure-probe.

When "very deaf" patients cannot bear rough, grating, or shrill sounds, a pleasant agency is a small music box (Cohen),

*Private statement; the cases are not yet reported.

on which is placed a cushion, and upon this the patient places the deaf ear, so that contact with it occurs every day for ten or fifteen minutes; this is to increase the mobility of the ossicles. Lucae has recommended an apparatus for increasing the mobility of the auditory ossicles in cases in which there is stiffness (ankylosis) accompanying a form of deafness in which the patient is not able to hear general conversation, and Rinne's experiment yields a negative result. It consists of a steel rod, or pin, at one end of which is a small conical depression for the reception of the short process. The pin goes through a conducting tube, and its other end touches a spiral spring fixed into the handle of the instrument, and yielding readily to pressure. In employing this "pressure-probe," or feathered sound, the patient's head is first fixed and the instrument introduced under a good light along the upper wall of the auditory canal toward the short process of the malleus. The latter is received in the hollow at the inner end of the probe, and sharp taps are then made against it; at first, one or two only, later, up to ten, to be repeated if the result is favorable. Lucae asserts (Gruber) that after the employment of this instrument the air-douche may be used with success. As almost all patients suffer pain on the slightest touch with a fine probe, a solution of cocaine must be employed prior to the operation. The tip should also be covered with delicate oilskin, else it will be found that excoriations will be produced. This operation is only justifiable in the hands of the competent aurist who is perfectly familiar with the parts. Improvement, which in some cases takes place after this painful operation, cannot be relied upon without treating the middle ear at the same time.

To Lubricate Catheters.

The Paris correspondent of the *Lancet* says that Professor Guyon, of the Necker Hospital, uses the following formula:

Bichloride mercury.....	gr j
Glycerin.....	ss 3ij
Water.....	
Powered soap.....	5iv-M.

This ointment is claimed to be unirritating to the urethra, and to possess greater lubricating power than either oil or glycerin—*Virginia Medical Monthly*.

SOCIETY REPORTS.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

January 9, 1895.

Drs. Daland and Robinson presented a
A CLINICAL STUDY OF THREE CASES OF
SPONTANEOUS HÆMOPHILIA IN
BROTHERS.

(See page 376.)

DISCUSSION.

DR. FREDERICK P. HENRY: Isolated cases such as have been described to-night are rare. It is generally possible to demonstrate the hereditary character of this affection, which is in reality the most hereditary of all diseases. There is in Switzerland a family of which the history has been traced for about three hundred years, and during this period there have been bleeders among the male descendants. The females, as a rule, remain exempt, the disease being transmitted through them to their male children. They are not necessarily exempt. Virchow believes that one woman may be affected to seven men in families of bleeders.

There are certain peculiarities about families of bleeders, and one is their fecundity. The decimation in numbers, caused by fatal hemorrhages, is made up to a certain extent by the fecundity of the females. Dr. Daland stated that in this case the mother was one of ten, and there have been counted two hundred and four children in twenty-one families of bleeders, giving a large percentage for each mother.

The disease has been supposed to be more prevalent among certain races, especially the Israelitish race. I think, myself, that this supposed predisposition would disappear if all infants were subjected to the traumatism which is an integral part of the Jewish ritual.

Symptoms. These were cases of spontaneous bleeding, but this does not remove them from the category of hæmophilia. It has been stated that the spontaneous form is more intractable than the traumatic variety, but I am inclined to

doubt the truth of this statement. Dr. Daland referred to the flushing of the face prior to an attack of bleeding; this is an old observation. Signs of cerebral congestion have been repeatedly observed in these cases. It is manifested not only by flushing of the face but by subjective signs, especially tinnitus aurium, and in the days in which bleeding was practiced phlebotomy was performed at this stage, and it is stated that the incision into the vein was not attended with severe bleeding when made in this prodromal stage of the affection.

The rheumatoid symptoms are interesting. They have been observed in nearly all of these cases, and have been attributed to hemorrhage into the joint, but in no case with which I am acquainted has blood been found in the joint post-mortem.

There is one affection that has been confounded with hæmophilia, but is not likely to be in these days, and that is leucocythæmia, when attended with the subcutaneous extravasation of blood.

The prognosis after the age of twenty-one is good. The tendency to obstinate hemorrhage seems to diminish after that period.

The cause of the affection, I believe, is to be found in the blood vessels rather than in the blood itself, and yet I make that statement with a certain reserve, because the treatment which has been found most satisfactory rather contradicts that assertion. Microscopic changes have, however, been found in the arterioles, consisting mainly in wasting or absence of the middle muscular tunic of the vessel. Vasomotor influences undoubtedly play their part in bringing about an attack. This is shown by the flushing of the face, which so often precedes an attack, and also by the fact that the attack may follow emotional excitement.

The treatment is both prophylactic and curative, and one element is undoubtedly

climatic. Dr. Daland's patient improved when removed from a high altitude to a lower. In recorded instances patients have been free from attacks in southern Europe, while they had repeated attacks in northern Europe. The disease is essentially one of cold climates.

There is one remedy which has been employed for nearly one hundred years.

This was recommended by Dr. John C. Otto, of this city, who was one of the first to write on the subject of hæmophilia. America deserves the credit, and has been given it, of having been the first to demonstrate the hereditary character of this affection, and one of the earliest writers on the subject was Dr. John C. Otto. His paper is to be found in the *Medical Repository* for 1803. He employed the sulphate of sodium in repeated purgative doses, and claimed that it was efficacious, especially in the early stage of the affection. Ergot and turpentine have also been used. The latter has been efficacious in quite a number of cases. The hydrastis canadensis has also been successfully employed. Probably the best of all remedies is the transfusion of entire blood, and the amount required to control the hemorrhage is exceedingly small. A few ounces will sometimes suffice. It is supposed that the entire blood furnishes to the circulating fluid the element in which it is deficient. This is supposed by Hayem, of Paris, to be the hæmatoblasts, or blood-plaques, which are so prominently concerned in the act of coagulation.

DR. THOMAS D. DUNN, of West Chester: I have long been interested in the subject of hæmophilia, having had knowledge of such a case when a schoolboy of thirteen. The more that I have studied hæmophilia the more have I been convinced of its hereditary nature. In many cases where the disease is supposed to have developed spontaneously in families, further investigation may show that the disease existed in previous generations. Sometime ago I reported to the College of Physicians a case of purpura hemorrhagica in a boy who had had several large hemorrhages, one from the opening of an axillary abscess and another from the extraction of a tooth. I exhibit a photograph showing the appearance on the eighth day of the attack of purpura.

Hæmophilia is a disease which has

been recognized for a great many years. The first record is by an Arabian physician, in 1107. Isolated cases then occurred from time to time, especially in the Jewish race, but later investigations show that it is largely an Anglo-Germanic disease.

As to the hereditary character of the disease, Grandidier, in 1855, collected 213 families in which there were 631 subjects of the disease. The 120 cases that I collected occurred in 37 families. Immermann collected 19 cases in 6 families, making in all 770 cases in 256 families, or about 3 bleeders to every family. In 1883 I reported a remarkable family of bleeders under the name of the Worrall-Garrett family. Some members of this family I was unable to find. Later I visited a lady in Delaware County who gave me a letter describing a hemorrhage which her father had had following the extraction of a tooth. This was in 1827, and an account of the case was published in a Philadelphia journal in January, 1828. Although two generations had been skipped, the disease again appeared. There were four sons, and three died of hemorrhage. The one that remained was not a bleeder. This was the grandfather of the child whose picture I have shown. The father never showed any tendency to bleeding, but another child in the same family has had many violent hemorrhages, both spontaneous and traumatic.

Dr. Henry referred to the frequency of the affection among males. I think that about 8 per cent. of the patients are females. One remarkable feature is that the children of non-bleeding men and women are more apt to bleed than the children of bleeders.

The prognosis in young children is very grave indeed. Of the 16 deaths occurring in the families that I reported in 1883, 9 occurred before the eighth year. Of the 212 deaths reported by Grandidier, 111 occurred before the seventh year. This shows the remarkable mortality in the early period of the disease. It is equally remarkable how early the disease develops. Thirty-six of the 38 cases that I collected showed manifestations before the age of eight years.

Treatment. I think that no female in a bleeder family should marry, whether she is herself a bleeder or not. It seems that the bleeder brothers who bleed themselves

are less likely to transmit the tendency than the non-bleeding brothers.

The remedies usually employed in the treatment of hæmophilia have been referred to to night. I have never had an opportunity of trying cocaine. The tincture of the chloride of iron has been used with benefit. I am positive that I have seen benefit from the use of sulphate of sodium, and this agent has been found valuable by several German observers.

In regard to the surgical aspect one very remarkable point is, that very few serious hemorrhages follow major operations in these cases. There seems to be less danger from extensive than from trifling wounds.

DR. ERNEST LAPLACE: I saw a case of this kind in von Bergmann's clinic in Berlin. A man came in to have circumcision performed. The bleeding was free and hæmostatics were applied. Finally, sutures were employed, but the man finally died at the end of a week from the results of the hemorrhage.

DR. DE FOREST WILLARD: I have had one unfortunate experience in a case of erosion of the knee, where the mother failed to inform me that there was any hæmophilic difficulty. The condition was apparently one of ordinary tubercular arthritis. At the time of operation I found the gelatinous material tinged red and some free blood in the joint; I also had great difficulty in controlling the hemorrhage. Bleeding occurred on the night of the operation and the following day, and continued until the child's death, a week afterward. Every method was attempted for its control, but proved ineffectual, as the oozing steadily continued. The mother afterward stated that she knew that the child bled easily, but had never heard of such a condition as "bleeder's disease." I have seen another somewhat similar case in a girl of thirteen, but which did not prove fatal.

Erigeron canadensis does not seem to have the same effect in these cases as in other forms of bleeding. For nasal hemorrhages I rely entirely on *erigeron*, and have not plugged the nares for years.

DR. JUDSON DALAND: I have been much gratified by the dull discussion on this interesting disease. A number of facts have been brought out that had escaped my attention. My own experience has been limited to the cases reported.

The observation of Dr. Robinson in regard to the hæmostatic action of cocaine is of great practical importance. The results in these cases seem to be more than a mere coincidence, and cocaine deserves a trial in subsequent cases.

It was on account of the great rarity of spontaneous cases that I made extensive inquiries as to the possibility of the disease occurring in former generations. I was able to inquire into the family history as far as the fourth generation, but failed to discover any similar cases. It is, of course, possible that some more ancient ancestor may have transmitted the disease, and these cases would, therefore, be examples of indirect atavism.

I was interested in the vasomotor symptoms of hæmophilia. These were so distinct in the case under discussion that the father was able to predict a hemorrhage from the flushed condition of the face and attendant nervous excitement. This fact perhaps indicates one of the methods by which hemorrhage may be initiated. The capillaries and smaller arterioles may be the seat of congenital changes rendering them usually vulnerable, and the mere act of dilatation may, in some cases, be sufficient to cause rupture.

The prognosis increases in favorableness directly as the years. This boy having lived to the age of thirteen years, we gave a guardedly favorable prognosis.

As regards the pathology of this strange disease, Dr. Henry is inclined to think that the chief factor is a morbid state of the walls of the blood vessels. The evidence points strongly to a curious fragility of the blood vessel wall. This particular case proves that we have a second factor, namely, that the blood has a diminished power of coagulation.

The suggestion with regard to transfusion is an important one, and this should be resorted to in obstinate cases.

In regard to the oil of *erigeron*, I would say that it was employed, but proved valueless.

This case showed so prominently the symptoms of rheumatism that I should like to mention a differential point of importance, and one that is new—namely, that in rheumatism we have uniformly, whether the rheumatism be acute or chronic, a remarkable increase in the coagulability of the blood. The almost total absence of coagulability noted in our patient

would, therefore, be of importance in excluding rheumatism and strengthening the opinion that the joint affection was hæmophilic in nature.

DR. JAMES C. WILSON: In a disease so rare as this it is desirable that personal experiences, although not very exact in detail, should be brought forward. In 1872 I saw a young man suffering from hæmophilia in the Pennsylvania Hospital. He had been carrying a crock and had tripped and fallen on it in such a way that one of the fragments struck him in the face, passing in front of the incisor teeth, cutting the mouth, and making a small wound. No arterial twig of any importance had been divided. He had bled for some days before coming into the hospital. He was taken to the surgical ward and the ordinary methods for the control of hæmorrhage employed. I have a vivid recollection of the surprise and disappointment of the staff at the failure to control the oozing. Various arteries of supply to the part were in succession ligated, with the result that the oozing continued and fresh oozing from the wounds was added. After several days, transfusion of blood was employed, but it was entirely without success, and within twenty-four or thirty-six hours the patient died.

Headaches in Heart and Kidney Diseases.

Pulv fol digit.....	gr 1
Antipyrin.....	gr 10
Caffeine.....	gr 1-5
Sod benzoat.....	gr 2
Cocain hydrochlor.....	gr 1-5
Pulv quin.....	gr 1
Pulv opil.....	gr 1-5
Glycerin, q. s. ut ft. pil. 50.	

Sig.: 1 to 5 to be taken daily.

—*Medical Times and Hospital Gazette.*

Painless Method of Treating Varicose Ulcers.

Dr. T. Will Summers writes to the *Medical Record* of a new and painless method of treating varicose ulcers. He first applies thoroughly a solution of bicarbonate of soda. After this has been done, a solution of methyl violet is applied, and it is allowed to dry. The methyl solution must be thoroughly put on, so that the base and edges are touched by it. When dry, a piece of absorbent cotton is placed on the ulcer, or, if more exist, on each one, and a Martin's rubber bandage over all. This procedure is to be repeated every morning. In the way of

medication, potassium iodide in ten to fifteen grain doses, three times a day, should be administered. The author speaks of a case which recovered in six weeks, and as the bandage and internal medicine has been used with no avail, he concludes that the application of the methyl violet should be credited with some portion of the praise due for the rapid recovery.

For Amenorrhœa.

The following (*Pract.*) promises well:

Hydrargyri chloridi corrosi.....	gr. ¾.
Sodii arseniatæ.....	gr. j.
Ferri sulphatis exsiccate.....	gr. xxx.
Potassii carbonatis.....	gr. xv.
Extracti nucis vomicæ.....	gr. v.

M.—Divid. in pil. xxx.

Sig.—One pill to be taken before each meal.

Application for Condylomata.

Acidi Tannici.....	Partes æquales
Hydrargyri Subchloridi.....	" "
Amyli.....	" "
Misce et fiat pulvis.....	" "

Sig.—To be dusted on the affected parts.

—*The Practitioner.*

Excoriations in Children.

Pritchard uses:

Salicylic acid.....	gr. viii.
Bismuth subnitrate.....	5 ii.
Starch.....	5 iss.
Ointment of rose.....	5 i.

Memorrhagic Chlorosis

Dr. Ch. Ligeols prescribes:

Sulphate of iron.....	gr. 38.
Extract of hyoscyamus.....	gr. 15.
Alcoholic extract of hydrastis canadensis.....	gr. 78.
Powdered licorice root.....	gr. 78.

Make 100 pills.

S.—Two at each meal, both during and between the menstrual periods.

Antiseptic Powder.

Hydrarg. chlorid. corros.....	gr. 1-5.
Ac. borici.....	5 i.
Ac. tannici.....	gr. x.
Sac. lactis.....	ad 5 ii.

Mix sublimate gradually and thoroughly with the sugar, then add the rest. Useful where iodoform is usually employed.—*New York Medical Journal.*

A Good Cough Mixture.

The following appears to be highly recommended (*Miss. Med. Mo.*):

Ammoniac muriat.....	5 iiss
Spts chloroform.....	5 vj
Tr opil camp.....	5 iij
Tr hyoscyami.....	5 iij
Syr tolu.....	q ad 5 iv

Sig.: Two teaspoonfuls in water every two, three or four hours.

THE LIBRARY TABLE.

BOOK REVIEWS.

A SYSTEM OF LEGAL MEDICINE. Volume II.

The first volume of this work has received notice in these columns. The second and concluding volume is now before us.

All the articles are written in the light of recent research and bear the stamp of painstaking, thoughtful and accurate work.

Few better books, old or new, on legal medicine, books more valuable to the medical profession have issued from the press.

Certainly there will be differences of opinion on many subjects discussed, but this fact will not detract from the general merit of the work.

The second volume, like the first, covers a variety of subjects of great interest and value to the profession, the more important of which are:

"Duties and Responsibilities of Medical Experts."

"Insanity in Its Medico-Legal Bearings."

"Mental responsibility of the Insane in Civil Cases."

"Insanity and Crime."

"On the Relations of Mental Defect and Disease to Criminal Responsibility."

"Accident Cases."

"Mental Distress as an Element of Damage in Cases to Recover for Personal Injuries."

"Feigned Diseases of the Mind and Nervous System."

"Birth, Sex, Pregnancy and Delivery."

"Abortion and Infanticide."

"Surgical Malpractice;" and other articles of equal merit.

The work is an excellent one for both the old and the young of the profession. The second volume also contains a concise epitome of the laws of the different states which relate to the general care of the insane. Published by E. B. Treat, 5 Cooper Union, New York City. R. P.

A TREATISE ON THE PRINCIPLES AND PRACTICE OF MEDICINE. By Austin Flint, M.D., LL.D. 7th Edition. Revised by Frederick P. Henry, A.M., M.D., Philadelphia. Lea Brothers & Co. 1894.

In one respect especially does Austin Flint surpass not only the writers of his own generation but also those of our day, and that is in accuracy of description. So long as medicine continues what it still is, his work cannot be excelled. However, since his day medicine, as well as the other sciences, has been making tremendous progress, and it has been found necessary to add new material, and to describe as new diseases what were formerly regarded as being merely unusual manifestations of certain known diseases.

Here, there are new articles on Pulsating Pleurisy, Well's Disease, Syringomyelia, Beri-Beri, Hereditary Chorea, Acromegaly, Raynaud's Disease, Leprosy, Influenza,

Lithæmia, Rickets, Actinomycosis, Anthrax and Glanders.

The edition published in 1888, contained a chapter on General Pathology; this has been omitted from the present edition and Special Pathology is considered in its stead.

Instead of adopting the metric system which is now used throughout all countries, the old English system of weights and measures has been retained in prescription writing.

In spite of the additions and changes, the real charm of the old work has been maintained, and there is handed down to us clinical description, still bearing the stamp of the great writer, which will serve as standard for many a year to come. J. O.

A Case of Tobacco Deafness.

Dr. Pierre F. Spaink, of Apeldoorn, Holland, writes: "Among the poisons for the nervous acoustics, Politzer names tobacco as well as quinine, salicylic acid, morphine and chloroform. And also Dvorzak and Heinrich, who, under the auspices of Schroff, intoxicated themselves acutely by nicotine, enumerates dullness of hearing among their symptoms. The following case, in which the nervous data of the family are hemiplegia spastic infantilis of a sister and idiocy of a cousin may be of interest. J. P., aged 14, had become dull of hearing since four years; last summer he improved a little, but the next winter he deteriorated again, so that his family called him completely deaf. Inquiry learned that the left ear was nearly deaf, and the other one very dull of hearing. The membranæ tympani were normal. There was a slight catarrhus of the pharynx. No amblyopia. Sensorium intact. Pupil and patella reflexes present. Pulse without particularity. There was no loss of flesh or tremor, and all functions were normal. He smoked and chewed tobacco the whole day, so that the consumed quantity of tobacco, even at a rough guess, was not to be calculated.

"The severe prescription to use no tobacco at all, and to take much food, had the consequence that after three weeks he heard well again, which, after six weeks (February, 1894), still was confirmed. The boy, who had grown thicker meanwhile, in the beginning of May became dull of hearing again, and it was proved that he had chewed tobacco again during the last three weeks. New severe prohibition had the result that he now hears very well."—*Quarterly Journal of Inebriety*.

For Eczema.

Acidi salicylici..... ʒj.
Zinci oxidl..... ʒiij.
Adipis lanæ hydrosol..... ʒj.

M.—Piat unguentum.
S.—To be applied daily.

—*Provincial Medical Journal*.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

Cough Mixture.

Cough mixtures should be regarded as a relict of ancient and unscientific methods of practice, and as most of them do more harm than good, their employment should be relegated to well-merited oblivion.

The sweeping denunciation of a time-tried, and, shall we say, fire tested remedy (?) apparently deserves some explanation, and as the season of the year is approaching when such preparations will be in active demand, some arguments against their reckless and indiscriminate use will be presented.

In the first place, cough mixtures do not benefit or improve the cough as we now understand a cough should be improved or benefited. True, the anodyne ingredient may lessen the tendency to cough, but opium or any of its preparations do harm by arresting the normal secretions, and thus the system becomes affected by the soluble poisons from the stomach and the intestine, to say nothing of the secretions retained by the kidneys, the skin, the pulmonary structures and the mucous membrane lining the upper air passages. When a person is enjoying fairly good health, he does not take cough mixtures as an agreeable pastime. No physician thinks of "bracing up" in a cold morning with a tablespoonful of cough mixture. If a man was varnished or painted all over, the elimination of poisons would be so interfered with that death would soon ensue, and this is substantially the effect that is produced by the usual cough mixture in general use. That patients who take cough mixtures do recover, will not be denied, but they recover in spite of the mixture; and it is a stubborn fact that such patients are always a considerable time in regaining their former health, simply because they suffer from the effects of toxic products taken into the circulation.

Some physicians favor a Turkish bath as a remedy for a bad cold, and in exceptional cases this plan works well; but it is not suited to many, for the reason that a bad cold is but the warning signal that the vitality of the organism has been reduced while the susceptibility to disease is increased. An able-bodied man accustomed to Turkish baths can stand one of these in case of a cold, but it is of more importance than the condition of the alimentary canal should receive the same or like attention. The danger is not all from without; it is probably greater from the alimentary tract than from the skin, and those who advocate the use of the bath, to be consistent, should at the same time insist upon the free use of a suitable saline.

In the second place, all successful (?) cough mixtures contain nauseants which tend to disorder the digestion; but were this effect is

only temporary, no material harm would ensue. These nauseants, however, are now promptly eliminated, and when the patient would be in a fair way to recover, their insidious influences begin to manifest themselves, so that neither the physician nor patient can understand why convalescence is prolonged. Cough mixtures are doomed; eventually they will be damned.

In the third place, cough mixtures contain more or less saccharine substance, usually sugar in the form of sirup, originally incorporated probably to make a nauseating draught palatable; but it is now well known that the introduction of sugar into the stomach, when in an unhealthy condition, is most objectionable, inasmuch as it starts up fermentation, produces body heat, and even by the wildest stretch of the imagination has no distinctly beneficial effect upon the cough. Let us have a new regime for the winter campaign.—*Editorial in American Therapist.*

Remedy for Insect Stings.

A paint for the stings of insects, in which ammonia is kept in close and prolonged contact with the affected part is prescribed as follows:

Aq. ammoniac.....	mc. l.
Colloidon.....	gr. i.
Acid salicylici.....	gr. v.

A few drops to be applied to each bite or sting.

—*Medical Chronicle.*

Pathology of Tetany.

Dr. John T. Carpenter, of Pottsville, Pa., read a paper before the American Medical Association in June last upon the above subject. After a short historical sketch, in which he credits Dance with having first noted the disease, he defines it as "anervous disorder, evidenced by tonic spasms of an intermittent character, which may involve any or all of the groups of voluntary muscles from the extremities to the jaws, and which may be reproduced at will, during a period of intermission, by compression of the nerve trunks of great vessels which supply the muscles which have been involved in the spasm." The pathology of the condition has been almost completely unknown, mainly, perhaps from the rarity with which a fatal termination is seen, but also because of the "various forms under which it has been observed to appear, and the various conditions and circumstances which attend its development." Four forms are spoken of by the writer as having been established, viz.: (a) Rheumatic, or epidemic; (b) a chronic form, due to some debilitating condition—e.g., prolonged lactation; (c) gastric, due to dilatation of stomach; (d) surgical, following removal

of thyroids. The first two are very seldom fatal, whilst the last two are commonly so. Surveying the conditions under which tetany develops, we find that they present one feature in common, viz., the opportunity for septic infection. "Tetany, as a rule, follows upon such diseased conditions of the system as are observed to produce morbid discharges from mucous surfaces whose absorption is known to cause symptoms in remote parts of the body, due to the circulation of septic poison," and, summing up, "In all cases of recorded observations of morbid processes antecedent to tetany, a probable sepsis may be inferred, and no other cause common to them has, so far, been discovered. It is, therefore, logically necessary to assign the causation of tetany to this fundamental peculiarity as the antecedent factor, and to consider tetany, not as an independent disease, but as a disorder consequent upon some one of those diseases which generate septic poison."—Abstract of paper as published in *Journal of the American Medical Association*.

Trichophytosis.

In experiments Du Castel found that the following formula answered best in treating this disease:

Chrysarobin	gm 10 to 25
Salicylic acid.....	gm 5
Ointment of styrax.....	gm 5
Ichthyol	gm 5
Simple ointment.....	gm 5

—*Union Medicale*.

SURGERY.

Pseudo-Puerperal Infection Due to Colon Bacillus.

From three observations by the author (Aug. Dumont, *Archives of Gynecology*) and in the clinic of M. Budin, the author concludes as follows:

1. There exists a pseudo-puerperal infection of intestinal origin.
2. The etiology is the alteration of the intestinal mucous membrane from pressure of the gravid uterus, an accumulation of feces causing a stasis and infiltration of the intestinal walls. This alteration permits the colon bacilli to pass through the walls into the peritoneal cavity, causing an infection which is perhaps unrecognized under the mask of puerperal infection. The alteration consists in desquamation or roughening of intestinal mucous membrane, thereby making the advent of the bacilli easy by removing nature's barrier.
3. The symptoms vary considerable. In general, the fever appears after normal labor, followed by obstinate constipation. In ten to thirteen days the "explosion" occurs—fever 39° to 40°, pulse 120 to 130, the countenance drawn, nose pinched, the skin cold, the tongue coated, the appetite lost, and the breath fetid. Intelligence is lowered. There is pain in the region of the cæcum and the colon. Palpation may reveal a mass of con-

siderable size, depressible, having the consistency of mastich, against the side of the uterus. By palpation the uterus may be separated from this mass. In some cases palpation reveals nothing.

Vaginal examination reveals the absolute integrity of the uterus and the cul-de-sac. The progress of the disease is variable. When there is a light infection a purgative causes the disappearance of the menancing symptoms. When the infection is profound it may continue several weeks; not infrequently ends in death.

The treatment, above all, should be prophylactic. The old custom of administering a cathartic to all patients at confinement is recommended. During pregnancy, mild laxatives or enemata should be systematically followed. On the first appearance of symptoms of this infection a brisk purgative should be promptly given. The classical intestinal antiseptics should be given; the diet, milk. Under this regime most cases recover.

Black Eye.

There is nothing to compare with the tincture or strong infusion of capsicum annuum mixed with an equal bulk of mucilage or gum arabic and with the addition of a few drops of glycerin. This should be painted all over the bruised surface with a camel's hair pencil and allowed to dry on, a second or third coating being applied as soon as the first is dry. If done as soon as the injury is inflicted, this treatment will invariably prevent blackening of the bruised tissue. The same remedy has no equal in rheumatic sore or stiff neck.—*Ez.*

An Addition to the Technique of Major Amputations.

Crede (*Arch. f. Klin. Chir.*) relates his experience in twenty-two major amputations which he had done within the past two years, and in which he obtained healing by true primary union in two-thirds of the cases. In the other cases healing followed, after slight local sloughing, within three weeks, except in one case in which there had been gangrene and septic infiltration of the tissues; here healing followed after four and one-half weeks.

Contrary to the general custom, this author makes flaps composed of both skin and muscular tissues and uses neither drains nor sutures. After making the flaps and tying the arteries, he places the flaps in apposition, and holds them there by means of a moist gauze bandage, three inches wide, applied so as to exact a uniform pressure, using neither drainage tubes nor sutures. The difficulty in the method is the application of direct pressure to the surface of the stump, which he does sufficiently to hinder serous exudation and to prevent bleeding. If there chance to be points in which the skin surfaces are not in exact apposition, they heal more quickly than the tracts left by the drainage-tubes.

The method of applying the pressure is not difficult to understand. The bandage begins on the under-side of the stump, passes over the end, and is repeated until the stump is covered over; during this time the apposition of the skin edges can be observed through the thin bandage. These longitudinal turns are followed by circular ones covering in the stump; then turns, starting on the sides and passing over the end of the stump, are used, followed again by spiral turns.

The bandage remains in place from eight to ten days, when all the deeper portions will be found to have been healed. If pain or high fever show themselves, the author splits up the bandage, but does not remove it, covering it in with another bandage.

Treatment of Artificial Anus.

Chaput (*Archiv. Gen. de Med.*) records thirty-five cases of artificial anus and stercoral fistulae which he has treated. After an exhaustive survey of these cases he has formulated the following conclusions concerning the treatment of this class of cases: He says that artificial anus can be treated by four different methods: (1) By the application of enterotomy, followed by obliteration of the fistula. (a) Enterotomy is indicated when the cases are uncomplicated and the aperture is easily accessible, together with a thin and long partition. When the spur is long and thin it is advisable to adopt Richelot's method, that is, section between two pairs of forceps and immediate suture. If, however, the spur is long and somewhat thickened, it is better to make the suture between to long pairs of forceps, which are allowed to remain in position. Enterotomy is contra-indicated when the spur is very thick or inaccessible, or when the aperture is closed by the mechanism of angular wounds. (b) After destruction of the spur, the stercoral fistula is closed. Small fistulae are closed by lateral enterorrhaphy, during which operation the margins of the fistula are freely separated from their surroundings, and then united with two tiers of sutures, the peritoneum being opened or not according to the requirements of each individual case. In the case of large fistulae lateral enterorrhaphy may be employed, but the peritoneum should not be opened. (2) Resection is as a general rule contra-indicated, but when in the course of a lateral enterorrhaphy the intestine is easily friable and is largely lacerated it is necessary to resect the two ends and reunite them by appropriate sutures. (3) Longitudinal enterorrhaphy: When the enterotomy is for some reason contra-indicated, it is sometimes advisable to employ longitudinal enterorrhaphy without resection. This operation is done by making a circular incision in the skin around the artificial anus and opening the peritoneal cavity. The two ends are drawn out, a longitudinal slit is made in each, and then the margins of the slits of the same side are sewn together with sutures. This operation is indicated when in the course of a lateral enterorrhaphy consider-

able constriction is met with just below the lower end. When the intestine is very friable it is contra-indicated. (4) Entero-anastomosis: Entero-anastomosis, followed by ligature of the two ends between the point of anastomosis and the stercoral aperture, is a simple, easy, and benign operation. It is indicated when the intestine is very friable at the seat of the artificial anus, or when there is a considerable constriction of the bowel in the neighborhood of the external aperture, and also when the inferior end is obliterated at the level of the artificial anus.

Treatment of Spasmodic Torticollis.

In discussing the operative treatment of spasmodic torticollis, in the *American Journal of the Medical Sciences*, Drs. Maurice B. Richardson and George L. Walton, of Boston, draw the following conclusions:

1. Palliative treatment, whether by drugs, apparatus, or electricity, will rarely prove successful in well-established spasmodic torticollis.

2. Massage may prove of value in comparatively recent cases.

3. Resection affords practically the only rational remedy.

4. Operation on the spinal accessory nerve may afford relief, even if other muscles than the sterno-cleido-mastoid are affected; on the other hand, the affection previously limited to the sterno-cleido-mastoid may spread to other muscles in spite of this operation.

5. No fear of disabling paralysis need deter us from recommending operation, as the head can be held erect even after the most extensive resection.

6. The most common combination of spasm is that involving the sterno-mastoid on one side and the posterior rotators on the other, the head being held in the position of sterno-mastoid spasm with the addition of retraction through the greater power of the posterior rotators.

7. It seems advisable in most cases to give preference to the resection of the spinal accessory as the preliminary procedure.

Ichthyol in Fissures of the Anus.

Van der Willigen warmly commends ichthyol in the treatment of fissures of the anus (*Journ. de Med. Monatshefte für Praktische Dermatol.*). The pure drug is introduced into the anus by a brush. The contraction of the sphincter forces this into all the folds of the mucous membrane. Little pain is excited. Treatment should be repeated daily. This patient is given liquid diet and occasionally castor oil. The first patient, who had previously been treated by every means short of operation, was cured in eight days, the other three in two or three weeks. One had already been subjected to operation without benefit. There was no recurrence.

OBSTETRICS.

On the Treatment of Abortion by the General Practitioner.

After a discussion of the causes and diagnosis of abortion, the prophylactic treatment is outlined. Underlying causes, in which are especially mentioned chlorosis, abnormal fixation and laceration of the cervix, indicate the direction in which therapy should be applied.

Unavoidable abortions may be considered in three classes:

1. As beginning abortions. If the process be not spontaneously accomplished the placing of a tampon is indicated, and if necessary the manual removal of the fetus.

2. As incomplete abortions. Here the removal of placenta and membrane should be thoroughly accomplished with the finger introduced sufficiently high in the uterus to sweep the whole wall. The use of instruments is not indicated. Dilatation of the cervix may be accomplished by introducing within it gauze that shall act as a tampon, and the subsequent employment of Hegar's dilators. If the os is patulous, narcosis is not necessary.

3. Complete abortions followed by hemorrhage. Here commonly the dull curette is to be used, but not always necessarily. On the contrary, a dietetic treatment with the use of the proper drug—ergotin—will not infrequently suffice.

After every operation an antiseptic, intra-uterine douche is demanded, and so much the more if there be fever.—*Dr. Czarnpin. (Berlin: Boas and Hesse).*

Cold Bathing During Menstruation.

Cold bathing during menstruation is a beneficial measure, provided women accustom themselves to the treatment by bathing every day for at least eight days before the arrival of the period, when they can continue during the menstrual flow without any danger. In the case of a very anæmic girl in whom this treatment was instituted it gave most satisfactory results. Houzel, before the recent Boulogne Congress, held that cold salt-water baths facilitate the menstrual flow, increase the duration of genital life, and likewise increase fecundity in a remarkable manner.—*Doctor Depasse, in Gazette de Gynecologie.*

Photographing the Womb.

A Swiss physician has described a method of dilating the uterus by means of tents, so that by the use of a mirror a perfect view may be obtained of the interior of the organ. Not content with this, however, he is unselfish enough to desire to obtain photographs of the uterine interior in various diseases of the organ. The future of woman is sad indeed if now her womb must not only be felt of, sounded and measured, but photographed as well.—*New York Polyclinic.*

Pigmentation in Amenorrhœa.

Lawrence (Bristol *Medico-Chirurgical Jour.*) reports the case of a girl suffering from amenorrhœa with pigmentation. This became so marked as to suggest Addison's disease. She was treated with wine of iron, 1 drachm, and Fowler's solution of arsenic twice daily, burgundy in moderation, careful diet, the addition of milk, and her life regulated in accordance with general hygienic principles. This resulted in complete cure after many months.

The Decline of the Pressary.

The *Lancet Clinic* says editorially: "No one invents a pessary nowadays in strange contrast to the time when scarcely a man prominent in the practice of diseases of women did not invent one." One may conclude from this that either all available pessary devices have been invented or that the use of the pessary is to be discouraged.

It is the latter view that Dr. J. G. Blake holds in a communication of the Obstetrical Society of Boston, April, 1894; his alternative for the pessary is of course surgical procedure. His complaint is more of the abuse than the use of the pessary, although he quotes Fritsch, a German writer who declared that he had spent ten years in learning the treatment by pessaries and considered it the most difficult in the whole range of gynecology, and that it is easier to perform a laparotomy than to apply an accurately fitting pessary.

The same author criticises their use, declaring that the pessary heals palliatively, but injures definitively; for it distends the fornix vagina so enormously, that even after it has been worn for years, a cure is not to be hoped for. On the contrary, retroflexion of the uterus returns after the removal of the pessary. The longer the uterus has been displaced the longer the time necessary to enable the reflexed ligaments to return to a normal condition; and a few days have been sufficient after its withdrawal to have the uterus fall back into its old position.

Among the means for obtaining permanent cures, Blake mentions narrowing the vagina; pregnancy following by prolonged rest in bed; dilating and curetting; and shortening the round ligaments. The first, he says, is only called for in complete prolapse, where no instrument, without external support, will keep the uterus within the vagina, but where it can be accomplished by narrowing the canal and the outlet; these cases are comparatively rare. The operation of dilating, curetting and packing is particularly adapted to the cure of anteversions, and to the removal of enlargements which attend all forms of backward displacement. The combined dilating, curetting, and Alexander, is to his mind, the true solution up to date of the vexed problem of backward displacements.

Ventral fixation, by opening the abdomen, and by various other methods (the vaginal, for instance) of fastening the uterus, had

been advocated by many writers. He sees no advantage in them over the simple, harmless and in most cases effective operation in proper cases, and of dispensing with pessaries.

He thinks no one has yet devised a simpler, less dangerous or more effective measure for the emancipation of women from the wearing of pessaries than the two operations of dilating and curetting, and Alexander.

[In spite of the craze for operating, a skillfully adjusted pessary serves an excellent purpose in some cases.—Ed.] *Western Med. Reporter.*

Profuse Menstruation.

The *Canada Lancet* contains an able article on this subject by Dr. Charles P. Noble, who, after a thorough discussion, offers the following:

Conclusions:—1. Menorrhagia in young virgins is usually functional, due to disturbances in the vaso-motor nervous system or to relaxation of the tissues, in general caused by the rapid growth which at times takes place about the time of puberty. Because of its pathology menorrhagia in young virgins is usually curable by general treatment.

2. Menorrhagia occurring in young child-bearing women is usually due to some mishap in connection with pregnancy or parturition, such as the retention of products of conception, laceration of the cervix or perineum, retro-displacement of the uterus, sub-involution, inflammation of the uterine appendages, and pelvic congestion. Menorrhagia in this class of women is curable. It usually requires local treatment of an operative nature. When due to sub-involution and malpositions of the womb, operation is unnecessary.

3. Menorrhagia in women approaching the forties, and in those who are older, is usually due to gross diseases of the uterus, such as fibroid tumors, polypi, adenoma, or malignant tumors. Menorrhagia occurring in this class of women, except when due to advanced malignant disease, is curable, but almost invariably requires operative treatment applicable to the disease present in the particular case.

4. As menorrhagia is a symptom and not a disease, an exact diagnosis is requisite in every case. With the exception of young virgins it is desirable that a physical examination of the pelvic organs be promptly made. The importance of this examination is the greater with the increasing age of the patient. Special considerations should influence the practitioner to postpone the local examination in the unmarried, unless it be reasonably certain from the symptoms that gross local disease is present.

5. There is no treatment for menorrhagia

per se. By general measures, such as rest in bed and the use of digitals and strychnine and ergotine, pelvic congestion can be lessened, and in that way menorrhagia can be, at least in part, controlled; but it cannot be too strongly insisted upon that in every case of menorrhagia an exact diagnosis must be made, and the appropriate treatment addressed to the disease which is present.

DISEASES OF THE NOSE.

Zinc Sterate in the Treatment of Atrophic Rhinitis.

The author, Dr. Joseph F. Gibb, discusses the nature and general management of atrophic rhinitis, and concludes by outlining the treatment pursued at the Episcopal Hospital of Philadelphia, and the results obtained in fifty four carefully selected cases. The plan of treatment consisted of cleansing sprays, followed by stimulating applications, as usually recommended in the management of atrophic troubles. The cleansing was accomplished by spraying the nostrils with an antiseptic detergent solution (Dobell's Solution), followed by applications of a hydrogen peroxide on a cotton wrapped probe if the inspissated crusts were not otherwise removed. After the membranes were entirely free from secretions they were coated with a thin layer of powdered stearate of zinc containing 25 per cent. of euophen applied by means of a powder-blower.

Stearate of zinc has an oily feel when handled and has a peculiarly strong adhesiveness to mucous surfaces, thus exerting an influence for a prolonged period when applied to mucous surfaces. The drug produces an unpleasant effect when used in the nose, and nearly all patients claim that its use is very agreeable. Very satisfactory results were obtained in the cases treated at the Episcopal Hospital, three or four treatments in some instances being sufficient to eliminate the disagreeable odor as well as the formation of scabs. The patients were treated twice per week, and in the interval between treatments were instructed to use a cleansing solution made from Seiler's Tablets. In a total of thirty-two cases of atrophic rhinitis that remained under observation until discharged, the shortest time being two months, the longest eighteen months, there were twenty-seven in which there was a complete disappearance of crusts and odor. The author concludes by recommending stearate of zinc as a base for carrying stimulating applications, because of its simplicity of application, its effectiveness in relieving the distressing symptoms, and the comfort that it seems to induce.